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PREFACE.

A RETROSPECT of twelve months is a serious thing to every man, but peculiarly so to the Journalist. With the responsibilities of the private individual, he is laden with all those which arise from his weekly communications and influence with thousands of subscribers and tens of thousands of readers. However anxious to extract complacency, the survey—be even the best intentioned—can never be *all* a pleasure. He may feel as we do—to have done some good—but the satisfaction of this thought will be damped by its sequel—might he not have done more? He may have avoided many temptations—but has he escaped all? Alas, he may have willed well always—fain hope now that all is well—and yet look back not without misgiving.

And yet there are some things of which we may speak with greater confidence. Whatever the success of our efforts, a question to be solved by time, we have fought hard and perseveringly for the common weal of our profession, and the society which it *should* ennoble. Deeply convinced that the happiness of our fraternity, and the advancement of its august study depend in a great measure on the character of our mutual relations as individuals, it has been our plan and pleasure to promote a spirit of kindly conciliation, of liberal interpretation of each other's actions, of harmonious mutual aid and fellowship. One of the wants, and not the least serious, of medical men is an *esprit du corps*. To rail at and decry one another, to pass over the unsuccessful and the needy among us with contemptuous pity, to classify the eminent among us as the merely lucky, the specious, the empirical, and the visionary—this has been too long the bad habitude of too many of our brethren. Carrying the habitudes begot by our physical studies into the world of mind, we are always walking scalpel in hand among the characters of our friends, always looking out among them for moral lesions, always occupied in diagnosing and studying their psychological maladies. That this spirit, so peculiar to ourselves, has been much engendered, and still more encouraged by the *Lancet*, there can be no doubt; and that it seriously interferes with our domestic comforts individually, and impairs the high character of our profession in public estimation, there can be equally little doubt. It has been the tendency, we believe, of most of *our* remarks to repress so bad a feeling, to make odious so *vulgar* a characteristic; we have endeavoured to point our brethren attention more to the good and the beautiful in each other's character, to encourage them to free inter-communion, and to establish that *esprit du corps* so beautifully displayed by the Church and the Bar, and which, without making the members of either worse citizens, makes them infinitely *better* professionals. As the opposite of wrong, however, is often far from right, we have felt that there was to be a limit to toleration, and that in an over-numerous profession there would always be individuals who could only be kept in order by the fear of a well-applied lash. Occasionally, therefore, we have been seen now administering a well-deserved castigation for some extra-professional practice, now venting our bile and gibes on some one of those young professional celebrities, who, carried like scum on the surface of the stream, show lofty pretensions in the proportion of their inanity, an over-weening importance in the proportion of their mental helplessness, and a daring dogmatism transcending even their ignorance.

We have dealt with science in the same enlarged spirit as with its professors. With the risk of some personal loss we have eschewed the fanaticism of custom which would lay down its own knowledge as the utmost boundary of another's. We have looked on science as the highest of human blessings, and have not rashly assigned to her for her utmost limits the advances of a by-gone day. Confident in Gamaliel's truth, that while illusion only wants publicity for its extinction, the light that is of God must continue to beam, we have been anxious to sit in calm judgment on the extraordinary, to try the new, to ascertain the true, to separate the probable of nature from the inconsistent, the possible from the incongruous, and carefully guarding ourselves against the responsibilities of possibly crushing a great truth because a previously unknown one, have as carefully abstained from giving to novel or startling pretensions that meretricious and unwarranted importance which would interfere with a calm investigation of their worth by those who, after all, and not we, are the true judges, the public. This was a bold, an unusual course; untried by any other medical journal; the timid thought, the boldness, dangerous, yet despite it, by its aid, perhaps, our success has been triumphant. We were understood.

On the government of the profession we have uniformly proceeded on the wide principle that *our* interest and those of the public are identical. We have separated medical reform from all question of party politics, and have presented it to the acceptance of the public, and particularly of Parliament, on its own intrinsic social merits. We have asked for legislation which might at once protect BOTH, for legislation which would make remunerative quackery as scarce a crime as good government makes treason, which would systematize medical education, make England what it should be—not the deserted, but the sought of Medical Students of all parts of the world—guarantee the competency of the Practitioner, elevate his position in society, and stimulate the whole mass of our brethren to a deeper and more fervent devotion to science, by making her gifts and honours for her successful votaries far higher, and far, very far, more numerous. And if occasionally dwelling on the causes which keep our profession

steeped down in Pandemonium, so far removed from the light and order and glory which our imagination depicts as its due abode, if occasionally dwelling on these causes, we indulge in unwonted acerbity on the dark presiding spirits who are more immediately connected with the grievous prospects we witness, we cannot think ourselves wholly destitute of claims on the extenuation, not to say approval of our readers. It is easy for those to be moderate who have no interest at stake, no matter of moment at heart. The Athenian orator would not believe his client's story of injuries till he saw him roused into a passion, and we should almost question the sincerity of our own feelings, were they less known to us, if springing from such wrongs, and excited by such consequences, they did not occasionally mislead us into some vehemence of expression.

The character of our scientific matter—the extreme value of the lectures of Professor Owen, of Dr. C. J. B. Williams, Dr. Scoffern, Professors Chomel, Velpeau, and others, which we have published in the two volumes of the expiring year—the extensive acquaintance we have given our readers of what German, Italian, French, and American medical men have been doing—our condensed summaries of all that was worth perusal in our British contemporaries—our *impartial* and PERFECTLY INDEPENDENT abstracts and criticisms of new British works—these are matters which give us, we trust, claims on our readers, entirely independent of our intentions.

May we be allowed one word on the matter of price—a petty matter, indeed, as a substitute for other worth, but a most important matter when found in companionship. OUR SIZE IS PRECISELY THE SAME as that of the MEDICAL GAZETTE or LANCET—our quantity of type considerably larger. OUR PRICE IS EXACTLY ONE HALF. This week, for the *moiety* of their charge, we are giving nearly double their amount of letter-press and paper. Now, if a weekly medical journal be of invaluable utility to the Student and Practitioner, if for no other reason by the acquaintance it gives him with every new improvement in medicine—and if in the present state of the profession a guinea more or less in the year, be a consideration that *cannot* be overlooked by many—our arrangement in respect to price can be considered as little less than a boon not only to a vast number of our brethren, but also to the patients who may depend on them. Our friends, the Medical Students, will do well to avail themselves of the advantage we offer; they may take our word for it, that in practice no greater cause of pleasing reminiscence can come before them than the well-bound volumes of the MEDICAL TIMES, formed of the numbers successively and regularly read by them as Students. There is no surer augury of future improvement and success, either in a Student or Practitioner, than the regular perusal of his weekly Journal of Medicine.

With these words we commit Volume VI. to our readers, expressing our pleasing hope that, taking their warm, nay, enthusiastic support as an indication of their approval, we may consider that our first year's stewardship has been neither unpleasing nor unprofitable to them, and making our humble assurances, that the coming twelvemonth will find us labouring for them with an industry not the less active because stimulated by gratitude, and with powers not the less effective because improved by experience.

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COURSE OF CLINICAL LECTURES ON DISEASES OF WOMEN.

Delivered in the Hospital of La Charité, by Professor VELPEAU.

LECTURE IX.—INCOMPLETE INVERSION OF THE UTERUS.

Prognosis.—Incomplete inversion of the uterus is a very serious accident, still we are not to believe that it must be necessarily fatal. Many instances may be cited of women who have survived it. I will presently relate the case of a lady on whom I operated in 1836, and who is still living. Some patients merely suffer in their general health from this disease, without their lives being materially shortened by it. In a few, by some fortunate circumstance, nature alone has in some measure operated a spontaneous reduction in a most unexpected manner. Professor Moreau, in his *Traité des Accouchements*, mentions two instances of this kind, which, although they bear reference rather to complete inversion of the womb, are sufficiently interesting to deserve mention in this place.

CASE.—"De La Barre, a surgeon at Beuzeville, having withdrawn into a chamber adjoining that in which his wife was put to bed, had scarcely heard the first cries of the infant, when those of the mother summoned him to her aid. The midwife, in trying to extract the placenta, had completely inverted the uterus, and, believing this to be a false conception, was attempting to drag it away, being assisted by another woman equally ignorant. De La Barre discovered the accident, but was afraid of attempting its reduction. Some imperfect trials were however made; the catheter was several times introduced to draw off the urine. The state of the patient became more and more alarming, on account of the persistence of the hæmorrhage. Six months after, the lady wishing to get out of bed, made an effort and fell on the floor. At the same instant she felt an extraordinary movement in her abdomen, accompanied by very acute pain, which was followed by syncope. When returned to a state of sensibility, she perceived that the tumour had disappeared; the inversion was reduced. This fact," adds M. Moreau, "when communicated to the Royal Academy of Surgery, was received with incredulity; it is even probable that it would have been forgotten, if, some years afterwards, Baudeloque had not observed a case even more extraordinary."

CASE.—"Madame Boncharlatte was confined with her first child in 1782. After the removal of the placenta, which was effected by introducing the hand within the uterus, she experienced great pain, and felt between her thighs a large mass, which was immediately pushed back within the vagina. The patient lost a great deal of blood, fell several times into a state of syncope, and was so weakened, that the accoucheur was afraid to meddle with the womb, lest the patient should die under his hands. After undergoing a long series of troubles, M. B——, at the end of seven or eight years, came to Paris to consult

Baudeloque. This celebrated practitioner examined the tumour, perceived its nature, and endeavoured to reduce it, but could not succeed. He prescribed baths and repose. On the eve of the day fixed for again attempting its reduction, some friends of Madame B—— would insist on her walking about her chamber; she attempted and suddenly fell in a sitting posture upon the floor. An extraordinary movement and an acute pain were felt in the abdomen; she for an instant lost all consciousness. Baudeloque, who was immediately called, could no longer discover the tumour which he had so carefully examined three days before. From this period, the patient regained her strength and *embonpoint*; a widow for some years, she married again, became *enceinte*, and had a happy delivery at the usual term. A year afterwards she died of some acute disease.

Still I should add, that facts of this kind can only be considered as fortunate exceptions, and no practitioner in his senses would calculate upon such results. Incomplete inversion of the womb undoubtedly causes, in the greater number of instances, results of the most grave description, consequences by far more serious than those induced by simple prolapsus of this organ. The repeated hæmorrhages which it causes, gradually exhaust the powers of life. The patient is unable to raise herself or make the least exertion without inducing syncope, as well as the most alarming dragging sensations in the abdomen.

CASE.—A lady whom I had often seen with M. Marjolin, again consulted me in 1836, after four years of suffering; pale and emaciated, with cedematous feet, this lady was unable to leave her bed, and was constantly suffering from hæmorrhage, or from *leucorrhœa*. Having returned into the country without deriving any benefit from our attention, she remained there in the same state, and I have heard nothing further from her since 1837.

In many cases the disease does not follow even so slow a course as this: when the constriction caused by the neck is very powerful, and there exists a real strangulation, the constricted part of the uterus inflames, becomes gangrenous, and the patient sooner or later sinks. Some instances are recorded in which a fatal termination has taken place in a few hours: a case of this kind occurred under M. Delmas, of Montpellier, and Mauriceau also relates two instances. The prognosis of this affection is so much more serious as the strangulation is more considerable, and as lengthened or badly directed attempts at its reduction have been performed. How many women have fallen victims to imprudent attempts on the part of ignorant midwives and accoucheurs? Instances of this kind are numerous. I will mention one which is inserted in the *Mémoires de l'Académie Royale de Chirurgie*. The woman, in this case, it is true, was ultimately cured, but still the relation of the details will show you the dangers to which she was exposed.

CASE.—A woman, who was put to bed with her first child on the 26th of May, 1746, but in whom the placenta was extracted with some difficulty, perceived the following night acute pains, which she attributed to having lost too little blood; she also felt the sensation as if some body were endeavouring to escape from the abdomen. A surgeon, who was called in the next day, taking this body for a mole, made for half an hour ineffectual attempts to extract it; he divided it, tore it with his nails, and removed a few portions. The attendants, being frightened at the cries of the patient, demanded another surgeon, who merely assured them that there was no mole, and prescribed an elixir, which did not produce any benefit. On the morning of the 28th, M. Hoin ascertained upon examination that this tumour, which had been mistaken for a mole, was the womb in a perfectly inverted state, and he became alarmed for

the patient on inspecting the portions which had been removed. He was afraid to attempt its immediate reduction, as the lever was very considerable, the abdomen greatly swelled, the hypogastric region distended and very painful, the respiration greatly constrained, the face red, and the skin burning: the tumour itself could not bear the least touch of the finger. M. Hoin adopted general bleedings from the arm and foot, emollient fomentations, injections, *lavements*, castor-oil and diluent drinks; such was the success of this truly medical treatment, that in the course of the following day, he was without difficulty or danger able to reduce the womb, which he did not dare to touch the evening before. A month after, the woman was perfectly cured.

I think I have said sufficient to show you that incomplete inversion of the uterus is a most serious disease, which merits the most earnest attention on the part of the practitioner.

Treatment.—If the ill effects produced by this affection are but slight; if the woman is able to take some exercise, or pursue a part of her occupations; and if also attempts at its reduction have failed, we must then adopt a palliative treatment—that is to say, a mild regimen, astringent injections, and the use of a pessary; but in cases of an opposite nature, we should attempt the radical cure, for, as I have previously said, this is a serious affection, requiring the most active means on the part of the surgeon. The first indication which presents itself, appears to consist in the reduction of the tumour, and giving the womb its natural form and position. But experience unfortunately too often proves what reasoning also indicates, namely, that in certain cases this reduction is almost impossible, and that it would not always be prudent even to attempt it. I will explain myself on this point. During the first hours, or even days, which follow an incomplete inversion of the uterus, we ought to attempt the reduction, and we may hope to succeed; the inverted portion is then, in many cases, sufficiently supple, and the neck through which it has passed is not so much contracted or hardened as absolutely to prevent its re-ascension. The case related by Leroux is an instance of this; other examples may also be found recorded. To attempt the reduction on being called a few hours, or even days after the accident, provided always that there exist no contra-indication, constitutes then a precept of so much more importance, as this reduction in an after period becomes almost impossible, and as the woman incurs the greatest danger. If the process of delivery is not yet concluded, and the placenta should be still adherent to a portion of the inverted womb, we ought, contrary to the opinion of Denman and some other practitioners, to proceed to the removal of this body, before performing the reduction. It is useless to say that in the extraction of the placenta it would be necessary to act with the greatest caution, for we may easily imagine that imprudent attempts would in this case give rise to complete inversion. To perform the reduction, we should make the woman lie upon her back in such a position that the pelvis shall be more elevated than the chest; then introducing one hand high up into the vagina, we make a gradual and continued though unequal kind of pressure, from below upwards, upon all points of the tumour; in a word, we proceed, always having regard to the seat of the disease, as in the employment of the *taxis* for hernia. During this manœuvre, by means of the other hand applied upon the hypogastrium, we may sustain the uterus, and favour the return to its natural position by using some slight suitable movements. I cannot too often impress upon you to act with great prudence and precaution in this operation; for without speaking of unfortunate occurrences which have doubtless been kept concealed, there are enough known to prove that many women have fallen

victims to imprudent attempts of this description.

When this affection is of long standing, having existed for months or years, we can no longer hope to obtain its reduction. Then, in fact, the uterine tissue has undergone a new modification suitable to its new position; it is, as it were, contracted and indurated; its inverted portion is swelled to such a point, that the neck of the organ presents a very narrow opening, giving passage to the *fundus* which is below. Its mucous surface, moreover, has assumed the dimensions of its original external coat, whilst the latter has become so contracted within, as merely to represent a very small cavity. When the disease has arrived at this period, there are but two courses to take—to do nothing, or else remove, either by extirpation, or by strangulation, the inverted portion of the womb. I have already said that, when incomplete inversion of the uterus produces no very serious effects, when the woman can take some exercise, in a word, when life is not compromised, the most wise course to pursue consists in watching the patient and abstaining from an operation which is always dangerous. Denman has seen women who have lived several years in good health with this affection; there are others whose health has been but slightly influenced. I should however add, that most of these cases have referred rather to complete than to partial inversion of the uterus. Still I will cite a case of this kind of which I was myself a witness; and you will see that the woman preserved this affection for nearly three years. But there are instances in which the surgeon cannot remain inactive; the woman becoming exhausted by frequent hæmorrhages of a more or less abundant character, is evidently progressing towards the tomb. In these cases this question presents itself: ought we to remain doing nothing while death stares us in the face? I think not. Not that I undervalue the dangers of the operation; I know well its gravity. But to speak only of the woman on whom I operated last week, could you exhort yourselves in not attempting the only resource which could snatch the patient from approaching death? It is true that she sunk; but would it have been otherwise if nothing had been done? Everything shows that it would not. Several successful cases, also, are on record from this operation; and everyone knows that questions of this nature can only be resolved by experiment.

Before entering on the mode of operation which I adopt, I will give a few details as to the ligature and excision considered separately.

1st. *Ligature*.—By strangulating the womb, in the manner of a polypus, a constriction is caused of so powerful a nature and so prolonged, as quickly to give rise, in a great number of cases, to the most violent pains as well as nervous excitement, or even convulsions, and sometimes to a fatal peritonitis. Many such cases are on record; yet the effects induced by the ligature are not always of so grave a character; some instances are mentioned of women who have been enabled to support this operation, and have thereby been cured. An example of this nature, related by Bloxam, was published in the *Gazette Medicale* of Paris. This case presents so high a degree of interest that I cannot do better than transfer it to these pages.

CASE.—“In July, 1835, my father and myself,” says M. Bloxam, “examined the uterus of a woman whose powers had become quite exhausted by a copious vaginal hæmorrhage. The blood had escaped at irregular intervals for several months, sometimes in large quantities, and at others more moderately; during the intervals a mucous discharge had taken place. We found a globular but oblong tumour, passing for an inch and a half beyond the *cervix uteri*; it was larger below than above; its neck gradually diminished in size from below upwards; this neck or pedicle might be traced with the finger through the neck of the uterus; handling and even pinching it caused no pain; but on digging the nail into it an uneasy sensation was induced, which however bore no comparison with the sensibility of the *cervix uteri*. The tumour was covered with a smooth, shining, and distended membrane; it was moveable towards the sides, and was so elastic as to bear its own weight without pressing heavily upon the

adjacent parts. The neck of the womb was soft, and allowed the passage of the finger between it and the tumour, but not to such a point as to enable the attachment of this tumour within the uterus to be distinguished. We at first took this mass for a polypus, and I thought that all the symptoms accorded perfectly with this idea. We consequently decided on applying the ligature, which we performed in the usual manner, by means of a canula, and then tied it strongly. The operation did not appear to give the patient much pain, and we left a few minutes after. But an hour afterwards we were informed that the patient suffered greatly. We returned immediately; the patient expressed by words and gesture, the great intensity of her sufferings, complaining of most acute pains in the back and *hypogastrium*, which nearly drove her out of her senses. We removed the ligature and her sufferings ceased; she expressed herself as perfectly happy; the pains did not return, and no bad result occurred which could be attributed to this operation. We then made a new examination of the state of the patient, and especially of the previous history of the disease, and ascertained the following circumstances:—1st. That the hæmorrhage had existed since her accouchement in the month of January; 2nd. That in this accouchement she had been attended by a midwife only; 3rd. That after the escape of the placenta, the hæmorrhage had been so abundant as to induce alarming fainting fits.”

Although these circumstances might, strictly speaking, have accorded with the existence of polypus, still we began to suspect that the tumour might also depend on inversion of the uterus, which would explain the effects occasioned by the ligature. In order to ascertain more clearly the nature of the disease, we passed a ligature rather tightly around the tumour, and drew it gently outwards. The neck of the uterus was found to be filled by the tumour; the inversion had become complete; the vagina also was inverted upon itself in its upper part, in the form of a *cul-de-sac*. On passing the fingers up to this point, we could discover no sign of the womb within the pelvis; this character was perfectly decisive, and we were at once convinced of this being a case of inverted uterus. The patient was young and the mother of several children; she was extremely enfeebled by the disease, and earnestly wished to undergo any kind of operation to be cured. After imparting to her husband the danger which the patient incurred by submitting her to the operation, we resolved to remove the tumour by means of the ligature.

On the 5th of August, at eight o'clock in the morning, fifteen days after the first operation, we applied a piece of catgut around the most constricted part of the tumour by means of the ordinary canula. The ligature was not drawn so tightly as in the first operation, but still sufficiently so to strangulate the tumour to a certain degree, and produce slight pain. In less than an hour the pain became intense, but not so much so as in the former application. A sedative draught was prescribed, (a third of a grain of the muriate of morphia,) which greatly quieted her. In the course of the evening, the pain reappeared; the skin was hot; pulse feverish; the draught was repeated; composed till midnight.—6th. Want of sleep; return of pain; vomiting; opiates were given, which induced a state of quiet.—7th. Condition satisfactory; progressive improvement.—8th. The ligature was tightened. Five hours after, fresh pains extended down the thighs; opiates were given and quieted her. The following days the ligature was tightened each time that it was found slack; the pain was relieved by the same means as before. On the 21st of the same month the tumour fell off; it was dissected, and we discovered that it consisted of the womb, the cavity and Fallopian tubes of which might be easily recognised. On examining the woman, the uterine orifice alone could be distinguished. In the place formerly occupied by the womb, we could discover only a hard body of an abnormal appearance. On the 26th, the uterine orifice was still distinguishable, but it did not admit of the introduction of the finger.

On the 27th of September, the health was good

in all respects; it continued improving, and the patient was eventually perfectly cured. The menses have not appeared since; but they are replaced by a sanguinolent discharge, which recurs exactly every month; she experiences at times *vertigo*, nausea, and hysterical symptoms, which she attributes to flatulence; she also complains of pains in the legs, and prickling sensations in the breasts and genital organs. She is more frequently sad than agitated; but she greatly prefers this condition to that in which she was before the operation. She experiences voluptuous sensations during the generative act, although less lively than before. On again examining this woman for the last time I found that the upper extremity of the vagina with the remaining *cervix uteri* were decended close to the vulva; the *os tinæ* could be very easily distinguished; its lips were rendered thinner and could be dilated by the finger, which then passed into a kind of *cul-de-sac*.

In this case we see that the ligature was employed in a graduated manner. This is a wise course, which you should adopt in similar circumstances. We see, also, that the tumour fell off fifteen days after the ligature was first applied, and that, during the whole of this time, the patient was affected with the most acute pains.

The application of the ligature does not constitute a very difficult operation. The thread is carried around the deepest part of the tumour, either by means of the index finger, or, if preferred, by the aid of a ligature needle. In a word, the same rule is followed as in placing a ligature round a polypus. The constriction is then made on the tumour by means of a tight knot. But in coming to the consideration of its advantages, I do not consider the ligature alone as the best curative means. The constriction which it is necessary to employ is always borne with great difficulty, especially as it is necessary to be continued for some considerable time. In the case related by M. Bloxam, the tumour did not fall off till the end of sixteen days, and we may easily imagine that in some cases longer time is requisite. Now, who does not see that, during this long interval, the patient is exposed to dangers of greater or less magnitude? No doubt can be felt on this point. I will shortly relate to you a case in which a surgeon was, on account of the evil effects of the ligature, obliged to have recourse to excision; I think that the ligature ought not to be adopted alone. Still I should add, that when it is resolved on employing it, the compound ligature is undoubtedly much preferable to the simple one. The compound, in fact, causes less pain, on account of its producing less traction as well as fewer folds upon the root of the tumour; it also cuts more quickly through the tissues, and is less apt to slip or become loosened when excision of the portion situated beneath is practised at the same time. I shall return to this subject before long; but before proceeding further I must relate to you a case given by Boyer, which will show that a ligature applied upon the inverted womb may cause the death of the patient.

CASE.—A woman, twenty-four years of age, pregnant for the first time, reached the end of her term, and was put to bed on the 4th of July, 1824. The midwife who attended, with a view to hastening the expulsion of the placenta, made imprudent and violent tractions on the umbilical cord, and induced complete inversion of the uterus, which hung between the thighs with the placenta attached to it. A young physician was called who mistook the nature of the tumour; and regarding it as a polypus upon which the placenta was implanted, he detached this body and placed a ligature around the tumour from which the blood was freely flowing. The constriction the ligature checked the hæmorrhage, and the tumour was afterwards pushed as far back into the vagina as possible. The ligature caused no pain of any consequence; neither convulsions nor any other remarkable effects were induced, although the constriction was increased from time to time. On the 24th of July, that is to say, eighteen days after her accouchement, the patient was brought to the hospital, and presented the following condition. The ligature-knot was projecting for about an inch and a half beyond the labia majora, and was very

the index-finger, when introduced into the vagina, recognised a round, softish tumour, around the circumference of which it could be easily passed, but without reaching the upper portion of this mass, or even the part where the ligature was placed. The abdomen was soft, almost indolent to the touch; pressure on the hypogastric region caused no pain, nor was any tumour perceptible in this part; the pulse was small and frequent; the countenance altered and of a remarkably yellow colour. The ligature fell off on the 1st of August, twenty-six days after the operation, and seven after the admission of the patient into the hospital. The next day, the tumour spontaneously escaped from the vagina. On an attentive examination of this tumour, which was of a globular form, the orifices of the uterine sinuses and the traces of the insertion of the placenta were discovered on its surface. At its upper part was seen a recent and puckered cicatrix, evidently owing to adhesive inflammation of the peritoneum, caused by the presence of the ligature. On destroying this cicatrix, a small cavity was laid open, lined by serous membrane. All these circumstances, combined with the fibrous structure of the tumour, the arrangement of its fibres, and the great dilatation of the numerous vessels entering into its composition, left no doubt as to its being a portion of the inverted uterus. After the escape of this tumour, another was discovered in the vagina on examination, much smaller than the first, and of a pyramidal shape. A slight depression of a round form and rather puckered was distinguishable in the central point of its base. Its summit was surrounded by a kind of ring, beneath which the finger could be passed for some lines in distance. I entertained no doubt as to this second tumour being formed by that portion of the inverted womb which was situated above the ligature. The patient experienced a marked improvement after the falling off of the first tumour; her appetite returned, and she demanded food. Still the countenance retained the same characters as before. On the 4th of August, at mid-day, she had a shivering fit, which lasted two hours, and was followed by heat and copious perspiration; a remission towards evening; but at ten o'clock, a fresh paroxysm of fever took place and lasted the greater part of the night.—5th, Two fresh paroxysms occurred; the hypogastric region was painful, especially towards the right side; vomitings of bitter yellowish matters; change in the sound of the voice; breathing hurried.—6th, Vomitings continued. Two paroxysms of fever, as the day before; pain in the glottis; difficulty of deglutition.—7th, Same state; slight remission. The patient demanded to be sent home, and she was seen every day at her own dwelling. The succeeding days the fever became continued; the features altered more and more; the powers of life gradually diminished, and the patient died on the 12th of August."

"I should have wished," says Boyer, "to have opened the body of this woman myself; but my occupations not allowing me, I deputed two of the oldest dressers to perform it for me. Some difficulties which they experienced in this operation preventing them from examining in detail the state of the abdominal viscera, they removed the parts of generation. I examined these organs in the presence of MM. Desormeaux and Deneux, and of a great number of pupils; upon slitting up the anterior wall of the vagina, throughout its whole length, we made the following observation; the tumour which had been perceived in this canal, immediately after the escape of the inverted portion of the womb situated below the ligature, had almost entirely disappeared; the small portion which was left was closely surrounded by a circular ring, and thus formed, at the upper part of the vagina, a kind of arched space, in the middle of which was a deep but thin cicatrix, which separated the cavity of the abdomen from that of the vagina. The remaining portion of the womb formed, in the lower part of the abdomen, a kind of funnel into which the broad ligaments, and the Fallopian tubes, were inserted; the ovaries, although dragged towards this funnel-shaped body, were still free and floating upon its sides. The bottom of this funnel was separated from the ca-

vity of the vagina by a very thin partition. It is thus evident that a great part of the fundus of the inverted womb had been removed by the ligature, which had finally caused the death of the patient."

MENTRURATION.

By T. W. B. KIRKBY, Esq., M.R.C.S.L.

THIS function, which consists in the periodical secretion of a sanguineous fluid from the uterus, usually commences in this country about the age of fourteen years. The discharge returns regularly in a healthy female every twenty-eight days or lunar month. The quantity of fluid secreted at each menstrual period varies in different women, the average being from three to four ounces, and its continuance three days. The menses may in some cases continue for even eight days, and as much as eight or ten ounces of fluid be secreted, and occasionally an interval of three weeks, or in others five weeks, may intervene between their return.

The age at which the menses are first established varies considerably, being secreted much earlier in some females than in others; they occasionally appear as early as the twelfth year, and in some are deferred until the twentieth.

Mr. Robertson, of Manchester, has given the following table of the period at which menstruation began in 450 females:—

10	menstruated for the first time at 11 years of age.		
19	-	-	12
53	-	-	13
85	-	-	14
97	-	-	15
76	-	-	16
57	-	-	17
26	-	-	18
23	-	-	19
4	-	-	20

It has generally been asserted and believed by writers, that the catamenia appear as early as the ninth and tenth years in hot sultry climates, and that in colder and more barren regions they do not occur until the twentieth, and an interval of two or three months elapses between their return; but Mr. Robertson, in an admirable Essay on Menstruation, in the thirty-eighth volume of the Edinburgh Medical and Surgical Journal, has shown that there is some reason to doubt whether the effect of climate may not in a great measure have been exaggerated. He has extensively investigated this subject, and finds that the same variation as to the first commencement of menstruation exists in all climates, and that the catamenia do not appear so much earlier in hot, or so much later in cold climates as has been generally supposed. The subject, however, is still open to investigation, and medical men residing abroad might confer a boon on science by procuring more extensive data on this point. The same gentleman has also shown, that although in a considerable majority of instances the catamenia recur monthly, still a greater difference exists both as to the interval between, and the regularity of their periodical recurrence, than is generally believed. "Indeed," he says, "I am convinced that the catamenia in perhaps the majority of women deviate not unfrequently from exact periods, and vary both with reference to the quantity secreted, and the continuance of the flux, without there being the slightest symptoms of disease either assignable as the cause, or appearing as the consequence of such irregularity. The statement which follows is the result of inquiries made in 100 instances.

Of 100 women, there were 61 in whom the menstruation recurred monthly; 28 in whom they recurred after an interval of three weeks; 10 in whom they recurred after intervals of varying and uncertain duration; and one (a healthy woman of 23 years of age) in whom they recurred regularly every fortnight." The menstrual fluid differs from blood, inasmuch as it does not coagulate, and is devoid of fibrin. In cases of imperforate hymen, this fluid is sometimes secreted and retained a great length of time within the vagina by this membrane, so as to accumulate in large quantity; but it has always been found uncoagulated when liberated, although in a putrid state. Some writers assert that the

menstrual fluid never becomes putrid; this is not correct, but it resists putrefaction for a very considerable length of time. The secretion is poured out from the capillary arteries of the internal surface of the uterus. That the uterus itself secretes this fluid, both Drs. Blundell and Clarke testify. The former gentleman, in his lectures, mentions a case; I quote his own words: "A woman was brought into this Hospital (Guy's) labouring under proclivita of the uterus. When I saw this patient, the womb lay forth, within sight, between the limbs; and the uterine secretion being present at the time, the fluid might be observed to issue from the os uteri, drop by drop."

The use of the secretion is undoubtedly to keep the uterus in a fit state for impregnation.

The catamenia never appear in some women; impregnation may nevertheless take place, although their non-appearance is most commonly indicative of sterility in the female. Sir E. Home has stated a case where menstruation did not occur till after the birth of the first child. Professor Frank has related a still more remarkable instance of a patient, who bore three successive children and never menstruated at all, either previously or subsequently. During pregnancy and suckling the menses cease. This last circumstance explains the fact so well known to the poor, that during suckling they are less liable to become pregnant, and are thus induced to defer the weaning of their children for a long period; but this is only for nine or ten months after delivery, as after that time pregnancy may again take place.

Some authors believe the discharge can recur regularly during the whole period of utero-gestation. Ingleby relates the case of a lady, the mother of seventeen children, on whose veracity he could rely, and who during her three last gestations menstruated regularly, and without a single intermission up to the ninth month: that women occasionally menstruate during the earlier months of pregnancy most practical men affirm.

Previous to the first establishment of the menstrual function, the female commonly experiences some degree of indisposition; she appears dull and heavy, complains of pain and uneasiness in the loins, disinclination to exertion, frequent lowness of spirits; sometimes there is disorder of the stomach and bowels; depraved appetite and inclination to eat strange things, such as chalk, cinders, earth, &c., accompanied with other hysterical symptoms. At last the secretion appears and returns with regularity; sometimes the discharge sets in with no attendant indisposition.

Many women experience some degree of indisposition at every return of the menstrual flux throughout their lives. The appearance of the menses is the most certain indication of puberty. Those distinctive characteristics of the sex now become perfectly developed; the breasts enlarge, the form assumes a degree of womanly elegance, the mental powers become stronger, and new emotions are awakened in the female heart. During the flow of the catamenia, a peculiar odour is present in the female which an experienced man will often detect, and sometimes a brownish-coloured areola around the eye-balls.

Exposure to cold and damp ought to be avoided during the period of menstruation, otherwise the discharge may become checked. This never happens without some degree of danger. The practice occasionally adopted by fashionable young ladies of bathing the feet in cold water, owing to temporary interruption of pleasure being caused by the flow of the catamenia, cannot be too severely reprobated.

The cessation of the menses occurs usually from 45 to 50 years of age, and is vulgarly termed "dodging time," and "change of life." In 77 women, Mr. Robertson found the catamenia finally ceased at the following ages:—

In 4	at the age of 35 yrs.	In 26	at the age of 50 yrs.
4	-	40	2
1	-	42	7
1	-	43	2
3	-	44	2
4	-	45	1
3	-	47	2
10	-	48	1
7	-	49	
			51
			52
			53
			54
			57
			60
			70

In the last case the woman ceased menstruating for 12 months about the fiftieth year. Again she became regular, and continued so till the age of 70.

The way in which menstruation ceases varies in females; the discharge may gradually subside, being lesser in quantity, and lighter in colour at each return of the menstrual period, or break off irregularly, an interval of one or two months elapsing in its appearance till it ceases entirely.

This period is regarded as critical by women, and is frequently attended with some degree of ill health. If a predisposition to organic disease exists, particularly of the uterus and mammae, it is more likely to break forth, and hence the health of females should be watched at this time, for although the dangers are much magnified, should disease arise, it may by judicious treatment often be subdued and kept under.

Vicarious menstruation.—The menstrual discharge may become suspended, and a flow of blood occur from some other organ of the body, at the same period as the catamenia have been accustomed to appear, so as apparently to be substituted for them. This vicarious discharge may occur from any organ of the body, as the lungs, bowels, skin, nose, eyes, ears, breasts, &c., or even from the surface of a sore situated on any part of the extremities.

I will here mention a case lately brought to me in a child aged about fifteen or eighteen months; the external orifice of the vagina was completely imperforate, with the exception of a small meatus at the upper part sufficient to permit the urine to flow, caused by a continuation of the common skin over the orifice from birth. By dividing this thin septum along the median line, and keeping the lips of the vagina separate with lint, the divided parts healed in a week and assumed their natural appearance.

T. W. B. K.

DR. PAINE, DR. CARPENTER, AND DR. FORBES.

Dr. Paine has forwarded us his answer to the letters of Dr. Forbes and the circular of Dr. Carpenter, in respect to the charges of Plagiarism so fully proved by the *American Physician* against the writers in *The British and Foreign Medical Review*. He begins—

Having exposed the remarkable tissue of misrepresentations which composes the review of my "Medical and Physiological Commentaries" (as appeared in the April No. (1841), of that *Review*, and having, for very obvious reasons, drawn the offender from his obscurity, I then proceeded to inflict upon him, yet farther, what I regarded as a proper chastisement for the cowardly and wanton injury which he had attempted to perpetrate towards myself, and upon Dr. Forbes for admitting so malicious an article into his Journal, by exposing the plagiarism to which Dr. Carpenter's letter refers. The plagiarism was fully substantiated as it respects the Journal; and circumstantial evidence was submitted, going forcibly to show the probability that Dr. Carpenter was the author. That evidence was conclusive in my own mind, till it should be rebutted by contradictory proof; and, of course, I had no doubt whatever that the public would sustain my conclusion on examining the nature of my premises. The repeated plagiarisms occur in the elaborate reviews of John Hunter's works, and of works by Carswell, Macartney, and Rasori, contained in the April and July Nos. of the *British and Foreign Medical Review*, 1839, and occupying sixty-one (61) pages of the Journal. These authors, too, being pretty much used up by the reviewer, I considered it but an act of justice to the brightest ornaments of our profession to remove this slur upon their fame.

It is the object of the circular letter (of Dr. Carpenter) addressed to Professor Dauglison, to disclaim the authorship of those reviews, and this statement is accompanied by a letter from Dr. Forbes to Dr. Carpenter, in which Dr. Forbes remarks that,—"I shall take no notice whatever of his (Dr. Paine's) attack, farther than relates to the charge of plagiarism. This is true, so far as the writer of the review on Hunter is concerned, but false as concerns you—since you did not write that

review. This I am ready to state to all persons, at all times, as the truth, without any reservation or equivocation."

I have also received a curious letter from Dr. Carpenter, stating that he is not the author of the reviews of Hunter's, Carswell's, Macartney's, and Rasori's works, accompanied by copies of certificates from two gentlemen to Dr. Carpenter, expressing their belief that he is incapable of an act of plagiarism. The letter also contains a reference to an article in the *Lancet* of Nov. 27th, from which it appears that it is the tendency of that article to exonerate Dr. Carpenter from the imputed plagiarisms, but which I have not seen. With the package came, also, the certificates of character supplied to Dr. Carpenter on the occasion of the review of his "Principles," &c., by the *Edinburgh Medical and Surgical Journal*.

This is all the proof with which I have been supplied in opposition to the various and forcible internal evidence of the imputed plagiarisms. This evidence I know to have been generally considered ample in this country, as it appears to have been also in London. Indeed, this fact is prominent upon the very face of the circular letter. Such proof, therefore, can only be set aside by producing some other name as that of the author in question. If my proof be insufficient, it would seem to be obvious that the name of the plagiarist should be given to the world. This is alike due to Dr. Carpenter, to men of letters, and certainly to the dignity of Dr. Forbes himself. Indeed, till then, such as are disposed to exonerate Dr. Carpenter, must hold Dr. Forbes responsible. Indignation at so great a fraud upon himself should prompt a disinterested editor to expose the offender. Why does not Dr. Carpenter call for a disclosure of the author? This is certainly a most natural, as it would be a summary, mode of disposing of the whole subject. But again, I say, where is the editor's self-respect, that he does not expose the individual who perpetrated the indignity towards him? "The conduct of the writer of that review," says Dr. Forbes, "in palming upon the Editor a portion of the writings of another for his own, cannot be sufficiently reprobated." Then, I reiterate, give us his name, and "let justice prevail, though the heavens fall." Present us another name; and then we shall have another phenomenon added to those extraordinary combinations of coincidences which Cotton Mather arranged under the denomination of "Unaccountables."

And yet mark the sophistry,—the effort to disguise, or palliate, the most flagrant plagiarisms to be found on record;—"if really done intentionally," says Dr. Forbes, "and with a view to deceive,—I would fain hope that the fact may admit of some other interpretation," &c. &c. And now let the intelligent reader consider the motives for this undisguised attempt to entrap him into the conclusion that this most degrading plagiarism may have been accidental! Let the reader then, also, interrogate himself as to the degree of credibility which should be ascribed to the man who can make such a compromise with the plainest facts, and with his own understanding of them.

And, why speak I of self-respect in relation to a man who professes the "truth without equivocation," and yet contradicts the principle in nearly every line of his letter? Does not the whole of his letter—I repeat it—bear an aspect from which truth recoils, as much as common decorum is startled at its low-born insolence? Take any passage in the solitary letter-page, and every unprejudiced mind will allow the justice of my criticism. What can be more wilfully false than the whole of the following? Thus:—

"In looking at the vast accumulation of words in Dr. Paine's pamphlet, I confess that I feel regret that the review of his book (just and accurate as I still hold it to be) was not more favourable; as it is melancholy to think that so much time and pains should have been stolen from tasks of usefulness, and expended in elaborating a work, which, of course, no human being will read, except the author himself, perhaps the writer of the inculcated article, and, alas, the Editor of the *Review*."

Here it is an obvious falsehood in affirming that he holds the review of my "Commentaries" to be "just and accurate," notwithstanding I have

shown that the review is, throughout, a tissue of deliberate misrepresentations. Again, the opinion is not less falsely expressed, that "no human being will, of course, read the work except the author himself, perhaps the writer of the inculcated article, and, alas, the Editor of the *Review*." And what shall be said of Dr. Carpenter for appending this abusive letter to his circular, after the marked offence of misrepresenting my labours and my character?

Dr. Paine omits notice of one of the most salient points of this unique paragraph. The *Review*, an acknowledged plagiarism, where opinions were made utterly dependent on the chance phrases which Dr. Channing's words supplied to the inane writer, is still declared by the editor just and accurate, and yet to finish the absurdity he can regret that the review was not made "more favourable!" id est, that it was not made "unjust and inaccurate." The mean attempt to wound at the moment he is pretending a feeling of benevolence is an act which no gentleman can look on without contemptuous pity. There is not only a bad heart in it, but a consummately petty mind. Dr. Paine continues:—

Again, Dr. Forbes states that my imputation of articles in his journal to Dr. Carpenter is founded upon the editorial pronoun "we;" whereas, the most important are directly claimed by Dr. Carpenter, in his own works, as his production; and where he refers to others in his review of my "Commentaries," I have shown that it is not in the ordinary way of editorial reference, but that he sets up a claim to the articles in question, of which the review of Hunter's works is one. Or take the following prevarication, by which Dr. Forbes would insinuate that Dr. Carpenter is not the author of the review of my "Commentaries," instead of a manly disavowal. "Perhaps," says Dr. Forbes, "when Dr. Paine discovers that he is mistaken in the affiliation of this portion of the *Review*, he may feel somewhat less confident of the evidence by which he thinks he has traced the authorship of other articles in it to you. I certainly shall not gratify his curiosity on this point, by either affirming or denying the accuracy of his conclusions; and I DO NOT SEE ANY REASON WHY YOU SHOULD." (*My capitals*.)

And why this wily advice not to admit or deny the authorship of the review of the "Commentaries?" Was it supposed that either might possibly invalidate the statement as to the plagiarism? Nevertheless, the cunning of this advice is worthy its well-disciplined author; however it is a palpable admission of the very fact which he aims at concealing. But, I will soon add the paragraph upon which I had just commented, in connection with another from Dr. Carpenter's letter, to exhibit more fully this lame attempt to insinuate the belief that Dr. Carpenter was not the author of the gross injustice which had been done to my labours, and of which Dr. Forbes still appears insensible.

That the author of the plagiarisms, whoever he be, should broadly deny it, seems almost a matter of course. It would be absurd to suppose him restrained by principle; and it is equally important that Dr. Forbes, even with his sensitive conscience, should make it appear that Dr. Carpenter is not the author of the reviews which embrace the plagiarisms; since Dr. Carpenter having avowed himself, in the preface to his "Principles of Physiology," the author of elaborate articles in the *British and Foreign Medical Review*, the proof of the plagiarism standing uncontradicted would be fatal to the existence of that Journal. But mark; as it respects the articles in question, Dr. Forbes affirms that those extensive reviews of some most eminent cultivators of medical science were "the first specimen he had had of this person's writing, and, with one trifling exception, the only one he had ever had!" *Credat Judæus!*

It will be recollected that the plagiarisms consist of thefts from the Rev. Dr. Channing's works, and that the imputation reaches to Dr. Carpenter's "Principles of General and Comparative Physiology." I refer to this, for the purpose of introducing the following coincidence from Dr. Car

penster's circular letter. "The ideas which I have expressed," he says, "have been so long familiar to my mind, that I cannot imagine that they involve anything peculiarly Channingian. If any correspondence do exist (!) it is easily accounted for by the fact, that I received my education from one, who was for many years the respected and attached friend of that illustrious man, and WHOSE mind, cast in the same mould with HIS, impressed MINE with those habits of thought, which had led to whatever SIMILARITY may present itself between OUR published opinions!!"—(*My capitals and Italics.*)

Now, then, this remarkable fact never would have been laid before the world, but for two obvious reasons; namely, 1st, because the parallel readings which occur in my "Examination" are *convincing*, and, therefore, we have here, under Dr. Carpenter's own signature, in his very letter of denial, a full admission that I had ample ground for the imputation of plagiarism, even had I not been prompted by the wanton attempt of this individual to falsify the hard labours of my professional life; 2nd, the foregoing remarkable fact is stated, also, because it is more or less known that Dr. Carpenter was educated by one who was "for many years the respected and attached friend of that illustrious man,"—but a fact which was wholly unknown to me till I saw it stated in Dr. Carpenter's circular!!

Then referring to the dismay he had thrown into the camp of the *British and Foreign Medical Reviewers*, who, resting on the assurance of a distinguished English physician, he affirms to be, in a great measure, "pert boys, just emerged from their medical studies," he continues:—

Take a passage to which I have already referred for another purpose, from Dr. Forbes's letter, in which, with a view to protecting Dr. Carpenter against the charge of being the author of the review of Hunter's, Macartney's, Carswell's, and Casari's works, he unwittingly avows that Dr. Carpenter is the author of the Review of Paine's Commentaries. Indeed, he even founds an argument upon the avowal. The authorship being admitted, Dr. Forbes then proceeds to show that Dr. Carpenter must not be held responsible for other articles because he employed the editorial *we* in his reference to others, in his review of Paine's Commentaries.

"It is singular that Dr. Paine should have been so ignorant of the ordinary mode of conducting a Review, as not to know that the reference from one article to another is no proof whatever of the identity of the authorship of the two—even when this reference is made by the writer of the latter article. But, most commonly, such references are made by the editor, without any communication with the original writer, in the exercise of the privileges inherent in the office of the great editorial WE."

The foregoing is the shuffling to which I have before referred as misrepresenting the means by which I have connected Dr. Carpenter with various articles in the *British and Foreign Medical Review*. The impotent attempt which is made in the circular letters to imply that Dr. Carpenter is the author of the review of my "Commentaries," in opposition to the various and overwhelming proof contained in my "Examination," and the simultaneous betrayal of this attempt at deception, as well as the other exposures which I have now made, divest the letters of all claim to credibility, even were not the parties arraigned for an offence which demands other proof of innocence than the mere negative of the inculpated. But, I also repeat it, these two letters not only establish the guilt of Dr. Carpenter as it respects his misrepresentation of my labours, and of my character, but so far to fix upon him the stain of plagiarism. In his future attempt to wipe away this stain, it will be well to express some contrition at the magnitude of the offence which was perpetrated in relation to myself.

SEALING WAX LUCIFERS.—This is an ingenious contrivance for sealing letters, &c., without the aid of a taper or seal, thus combining all the paraphernalia, previously required, in one item.

ON THE ATMOSPHERIC TREATMENT OF THE LUNGS.

BY J. JEFFREYS, F.R.S., &c.
[Extracted with the Author's permission.]

PNEUMONITIS, croup, laryngitis, and bronchitis, are the diseases which have long appeared to me to stand greatly in need of this treatment, especially the two former.

In the case of pneumonitis, the most pathognomonic symptoms have their character greatly modified by the hygrometric state of the air respired. In an atmosphere of ordinary dryness, as in the ward of a hospital, we have in this disease, in the first place, a respiration of twice, and even thrice, the natural quickness, and short in proportion.

It is not the pain attending the inflating of the lungs which alone causes this shortness of breathing, for it is present in cases where there is little pain. The swollen state of the membrane affected, arising from the turgid condition of its vessels, must, no doubt, be concerned, as is supposed by Dr. Weatherhead* and others, in producing the shortness of breathing; but this very state may, in a great measure, depend upon, or be aggravated by, the constant admission of air possessing qualities irritating to the morbidly sensitive membrane.

Such a comparison as that instituted between the pulmonary and other exposed surfaces, may assure us that in pneumonitis distress from exsiccation must be present to an extent which would account for any degree of embarrassment in the respiration. The rust-coloured tenacious sputa characteristic of pneumonia, and which follow the state of dry coughing, are just such as might be expected to proceed from an inflamed membrane, irritated by exsiccation. This secretion, it is well known, has nothing in it of a resolving action. It precedes any relaxation of the skin. It has long appeared to me to owe in part its gelatinous character and sanguineous tinge, to the effect of air sweeping over an irritated membrane, and aggravating its dryness, until the membrane is in such an injected state that lymph, tinged with blood, is thrown forth by vessels which, in a healthy state, ought to admit and to eliminate only a thin mucous fluid. The professional reader is doubtless aware of the important conclusions to which the inquiries of Dr. Addison† have brought him with respect to pneumonitis, namely, that it has its seat in the air-cells of the lungs, and is, in fact, an inflammation of the extreme portion of the pulmonary membrane, where it lines the cells. In this view he is followed by Dr. Hodgkin, who, in his able work on the mucous membranes‡, appears to consider the evidence by which this point is established sufficient and satisfactory. Now, bronchitis being an inflammatory affection of the same membrane less deep-seated, where it lines the bronchia, there would appear to be thus established a near alliance between these two diseases. Indeed, according to the views of some pathologists, the various affections of the mucous membranes of the respiratory organs are only modifications of one disease. Certain it is, that they are often so much modified by circumstances as to lose, in part, their distinctive character. It is a remarkable fact, that Huxham observed the same epidemic to be pneumonia on dry and elevated spots, but a bronchitis in low moist situations. The influence of moisture in the air in modifying the morbid action of the pulmonary surface is here curiously set forth; while it notably points out the importance of the hygrometric arrangements in our view. Whatever trouble might attend them, it would be no small reward

for our labour if we could combine with active treatment measures which would not only prevent a return of severe symptoms in pneumonia, but would tend to resolve them into such as accompany a milder form of bronchitis. Here I cannot refrain from mentioning a case which appeared to me of a very encouraging kind, considering the imperfection of the measure employed. Though not engaged in the practice of the profession, I was asked to visit a female of about 45 years of age, suffering under acute pneumonitis, which required active treatment. On the following evening, although the symptoms were moderated, there was still some pain, distressing cough, and dyspnoea, with a considerable expectoration of the characteristic sputa, so tenacious as not to be detached from the vessels in which it was contained, even when inverted, although there was a pint in quantity.

With the above views long upon the mind, I could not but desire to throw *humidity* as well as warmth into the air respired. The respirator is so constructed as to effect both these objects, and with great benefit in chronic cases, but I never contemplated its use in the acute stages of disease; nor is it, in my opinion, hygroscopic enough for our present purpose. In acute inflammation, the breath is too dry to yield sufficient moisture to the metallic wires for rendering the inward current humid. However, for reasons above stated, I preferred it to the temporary, too heating, and unequal action of any inhaler; and I accordingly applied one of full power. As the temperature of the room, owing to the severity of the weather, was low, the respirator condensed moisture from each out-going breath sufficient to lessen the dryness of each in-coming current, so as to produce a decided effect upon the symptoms. A considerable decrease in the dyspnoea and cough took place, and in the course of a day the sputa became changed in quality. They had lost their tenacity, and were now ropy, and expectorated with comparative ease. They partook of the character of the sputa of both bronchitis and pneumonitis. This effect obviously resulted from the uninterrupted respiration of air, moderately warm, and nearly at the dew point. It is, however, only under favourable circumstances, where the acuter symptoms are nearly subdued, that means such as these can produce so marked an effect; and I have mentioned this case, not to recommend the use, in the acute stages of disease, of an instrument designed for the chronic stages, however beneficial it is in these; but as it stands forth an encouraging fact, showing the power of such an atmosphere as we are in search of, even though imperfectly humid, when it acts *uninterruptedly and equably*.

In acute bronchitis, we may find reason for considering the exposure of the membrane to the action of the air a cause of irritation, even in a greater degree than in pneumonitis, since the seat of the disease being nearer to the entrance of the chest, subjects the membrane to recently-inhaled air, and also to a more sweeping movement of the air over it. Accordingly, in the acute stage of bronchitis, writers on this affection have noticed symptoms indicative of a similarly dry state of the membrane affected. The constricted state of the larynx and trachea, and wheezing, so well described by Dr. Badham, in his able Treatise on Bronchitis*, and noticed by subsequent writers, together with the dragging downwards of the larynx during inspiration, observed by Dr. Cheyne†, do all exhibit the instinctive struggle made by those parts, which are, as it were, the portals to the lungs, to prevent the entry of air; irritating doubtless,

* A Practical Treatise on the Principal Diseases of the Lungs, p. 147.

† Med. Chir. Trans. vol. vi. p. 145.

‡ Pages 88, 89.

* Pages 53 and 54.

† Pathology of the Membrane of the Larynx and Bronchi.

as in the case of other inflamed surfaces, on account of the drying it occasions. In the case of the last symptom, the downward motion of the larynx, it must be produced in the following manner. The demands of life requiring that air should come in, excite, by an antagonist impulse to the above, the muscles of inspiration to expand the chest. Hence the pressure of the air for entry forces down the larynx, which is resisting its entrance. The tardy and unwilling admittance of air is, I think, in a striking manner shown by this symptom; and it proves that the air is itself a cause of distress, and not of comfort, to the parts.

The thick tenacious secretion often found on the membrane, in cases running a rapid course, and that form of bronchial polypus unattended with hæmoptysis, resembling the secretion of croup noticed by Dr. Cheyne, seem also to point out a condition such as might be expected from an exciccation of the membrane, and thus form a connecting link between this disease and both pneumonitis and croup. In a case of severe catarrh in a stout female, which very lately came under my observation, I had to witness effects attributable mainly to the moistening power of the respirator, which were as remarkable as in the case of pneumonia already noticed. The symptoms had extended themselves to the chest, with bronchial distress, incessant cough, and much dyspnoea; but the febrile symptoms were not yet high in proportion. After other treatment, diaphoretics were employed; but though sickness was induced, there was no relaxation of the skin. Two hours after the application of a respirator of full power, she expressed a sensation of commencing relief, and in less than twelve hours more the most distressing symptoms had subsided; the expectoration was loose, and even thin; the cough was almost gone; and there was a free perspiration on the skin. The complaint was in fact cut short, for she rose the following day, and continuing to wear the instrument, commenced, though weak, to attend to her usual employment. I believe she wore it night and day for three or four days more before leaving it off. If in this mild form of acute bronchitis such effects resulted from the treatment in so modified a form, designed for the chronic stages of disease, might it not in acuter disease, when carried out in a manner proportioned to the severity, be expected to prove of proportional value?

It is true that in fatal terminations of bronchitis an opposite condition to dryness is oftentimes concerned in producing death; as where the disease concludes its work by deluging the lungs with a watery secretion, which causes suffocation; but we shall find the tendency to this, for the most part, proportional, *cæteris paribus*, to the previous inflammatory excitement. Thus, although in the extremes of infancy and old age, and in peculiar constitutions, that debility in the smallest vessels is readily induced which gives rise to the copious effusion, the laws of animal life assures us that this debility, in the case of any one individual, will be proportional to the previous excitement; and attentive observation will always prove it so. In proportion as we can employ measures at the first, the power of which in lowering excitement is considerable, while their tendency to induce debility is small, we invariably find the final debility to be lessened, while it is aggravated by every irritant which heightened the previous excitement.

It were well if for such cases we could command an atmosphere freed from mechanical impurities, and carefully tempered to that de-

gree exactly of warmth and moisture adapted to the case, and maintained very steadily at the same, excepting when nicely varied to suit any change of the symptoms. Aided by the soothing influence of such an atmosphere, we might find the general treatment requiring to be carried to a much less extent than at present to produce equal effects.

Again, in the less numerous cases, where a large secretion takes place in the *active* stage of bronchitis, there is every reason to view this effusion as occasioned by that high degree of excitability to be found at times in secreting organs, which will cause them to send forth a gush of fluid each time they are acted on by an irritant, and even to be thus affected over their whole surface, when its action is confined to one spot only. The application of this fact has been well made by Dr. Hodgkin* to account for a morbidly increased secretion from a membrane actively affected. Now we shall find, that not only cold and damp, but very dry air, will often produce this effect, as upon the eye, inducing a gush of tears, or on the nasal membrane, when irritated, causing a running at the nostrils. I have known persons affected, with what passed for a severe cold, by the intensely dry air of the hot season of the western provinces of India.

As already remarked, when we bear in mind the great difference of effect from the small differences of temperature which constitute the cold, the warm, and the hot bath, and that the object before us is one requiring great nicety for realizing its important effects; and when we contrast with these points the very irregular action of measures now in use, and further consider that any of these means are applicable only at intervals, while an *uninterrupted* operation must be viewed as *essential* to the very principle of our object, we are, I think, compelled to consider the effective treatment we are now in search of to be unattainable by any means we now employ.

We are thus led to the second inquiry after suitable means for giving operation to what may be termed the atmospheric treatment.

Under the conviction that it is only necessary for the importance of the object to be duly impressed on our minds, to ensure very soon the devising of suitable measures for commanding it, it is not my wish to occupy much space by entering into a minute description of any apparatus I might think the best for the purpose; but the reader will allow me to make a few remarks which may place in a very practicable light the treatment desired. Instead of any inhaling instrument, useless for our present purpose, or of the neat apparatus of Dr. Corrigan, well adapted for its peculiar object, but quite unsuited for the present; instead also of the chamber judiciously suggested by Dr. Williams, where a little vapour only is wanted to accompany a medicinal substance, like chlorine or iodine, which, as he states, "a saucer floating in hot water" may supply; instead of these means, however good for medicating, at intervals, the air respired in chronic cases, it would, I conceive, be desirable to throw a partition or diaphragm of boarding, or of air-tight cloth, across one end of the ward, so as to part off a chamber about four or five feet broad, into which the head of the patient should project while his body lay in the ward itself. A soft waterproof curtain might encircle the neck, and be suspended in such a manner that it should not hang within a foot and a half of the face, in order that the respired currents might pass freely to and from the nostrils. Any condensations upon that side of it might be conducted off by a fold formed into a little gutter, so that there should be no trickling of

moisture over the neck. The chamber so parted off might again be divided by cross partitions to give each patient's head a distinct compartment. I am of opinion that the capacity of each compartment ought not to be less than 200 cubic feet, although the artificial atmosphere ought to be undergoing constant renewal, by being forced in above and drawn off below. Unless it were spacious, an unpleasant current would be felt, to prevent which I would recommend that the air should be pressed in through a false ceiling or tent of open canvas. It would then ooze in over the whole surface, and should pass out below, and it might be renewed abundantly without any perceptible draught.

The atmosphere should be manufactured by an apparatus which drew fresh air from without through several screens of cloth or gauze of progressive degrees of fineness, that in cities all particles of solid matter might be mechanically removed from it. Any person who has tried the filtering of air for ventilation himself, or has seen the apparatus introduced by the late Mr. Oldham, in the note-room at the Bank of England, must be surprised that the lungs of persons in health can endure an unstrained city air, and must marvel at the subsidence of irritation, when once excited, in lungs which have no other air to breathe than such as is charged with dust and acrimonious particles of all kinds of organic matter. The quantity of impurities, which may be separated by such an apparatus, would astonish a person who has not noticed it; and a physician can hardly fail to desire that his pulmonic patients might be exempted from the necessity of breathing them.

The apparatus should have a provision for heating a *portion* of the air thus purified to any temperature under 200°, and for conducting another part of the purified air into the former in a cold state, in regulated proportions for reducing the temperature, and precipitating from it moisture, if desired, which had been taken up by the following means, so as to produce a warm cloud; also for correcting fluctuations in its temperature, arising from any unsteady action of the provision for heating it. These mixed currents of pure air, having a temperature higher in any determined degree than when they will be in the respiring chamber, might now be conveyed through the meshes of a very open retiform cloth, which might be made of cotton wick loosely wove, and previously boiled in an alkaline solution, to remove any native oil and other grease which would prevent its absorbing water.

Such a cloth is very bibulous,* and its capillary power is so great, that if the lower edge dip into water the whole surface up to the height of two, and if it be inclined, of four feet, will be kept wetted. This method of giving moisture to the air, by carrying it through a wetted net, I consider preferable, in some respects, to carrying it over heated water, or injecting into it jets of steam. The defect of both of these is, that they are liable to give too little moisture or too much heat with it to the air. The cloth would also perform an important part in abstracting from the air particles of recent smoke and dust too fine for any dry filter to detain, but which the moisture attracts and retains; and it would even condense many gases, of which the copious water on the cloth would retain the greater part, and the water evaporating at any time the smaller. Thus, if a succession of such cloths were employed, the purification might be carried so far as perhaps almost to convert city into country air.

* I have tried various kinds of web of different tissues made for experiments on evaporation, conducted on a considerable scale, which established to my satisfaction the power and steadiness of this kind of interstitial evaporation.

† Hastings on the Mucous Membrane; Badham of Bronchitis; and others.

§ Edin. Med. Journal, vol. iv., p. 442.

* Lectures on the Mucous Membrane, p. 64.

Nevertheless, in the absence of the cloth, either of the other methods, properly adjusted, might answer. The air may thus have any determined quantity of moisture given to it; and it might be cooled down to the temperature for the respiring chamber, which, for different cases and periods of illness, might have an extreme range from 50 to 150°. This for humid air would, I conceive, be a sufficient range. In like manner every degree of humidity ought to be at command from that moderate proportion of vapour, which would leave some degrees of dryness in the air, so that it could still carry off vapour from the lungs, up to a state of saturation, in which it would excite no evaporation. And, furthermore, not only should a saturated atmosphere be at command, but one even in which vesicles of precipitated vapour were suspended; in fact, a warm cloud, which, when inhaled, would supply moisture to the absorbents of the pulmonary membrane, while it demanded none from the exhalents. It is not possible, however, to form beforehand any exact judgment upon these points. When we consider the very different effects of baths differing little in temperature, we may, not without reason, anticipate the necessity of establishing the treatment before us, upon a series of experiments, from which general rules might be deduced, to be modified, in each particular case, according to the judgment and experience of the physician. Thus, in some cases, where the symptomatic fever ran high, it might be possible and desirable *gradually* to lessen the warmth of the respired vaporous air, until it carried off much of the excess of animal heat. In this manner a temperature might by degrees be obtained, with relief to the patient, which could by no means be endured if suddenly induced, or if attended with any draught. This, however, is merely a conjecture. A safer plan perhaps would be to keep the *surface* of the body moderately cool, while the air respired was warm. I conceive it to be of much importance to separate the chamber in which the patient respired from the rest of the ward, that the lungs and the skin might be exposed to different atmospheres. We often find a fomentation to be very soothing to an inflamed part, at a time when a general immersion of the body in a bath of as high temperature would greatly aggravate any attendant fever. For this reason the surface of the body ought not to be subjected to a fomenting atmosphere required only by the lungs. Moreover, by favouring exhalation at the cutaneous surface, we might encourage absorption at the pulmonary, especially in cases where the antimonial treatment was employed. In these we might reasonably hope that a general relaxation, with determination to the skin and inward relief, would be materially aided by an arrangement in which one atmosphere, by removing the irritating demand of the air on the pulmonary membrane, and even favouring absorption on its surface, was giving effect to another atmosphere which encouraged exhalation over the cutaneous surface. How opposed to this is the state in which intense determination to the pulmonary surfaces, with a febrile constriction of their vessels, and by sympathy of the skin, is kept up by a power constantly acting to induce exsiccation of the former, and denying to the absorbents any the least moisture by which relief might be afforded to the parts directly, or by sympathy! In cases of croup, who will undertake to say that much aid might not be afforded our treatment, if, throughout the acute stage, from its commencement, the air-passages of the little sufferer could be given a free and uninterrupted supply of a pure, tepid, saturated atmosphere.

I cannot refrain from mentioning a case related to me by a late practitioner of much ex-

perience, upon my stating to him this view in connection with croup. He said that on one occasion clothes hung to dry before the fire in a room in which a child lay very ill with croup, rendered the air humid throughout the night. The relief to the child's respiration was in the morning so great as to prove critical, giving successful effect to the active treatment he had employed. He appeared to entertain so little doubt that this simple cause gave the favourable turn to the disease, that it seemed surprising the views which this particular case ought to have suggested had not been followed out to the generalization they admit of. As to the humid climate thus formed, though happily advantageous in that case, the method by which it was produced was much too uncertain; and had the temperature been too low the effect might have been injurious. Moreover, it involved the skin as well as the lungs, which, as already stated, would appear a measure to be avoided. For such, and other acute cases in private dwellings, a portable apparatus provided with curtains extensible into a suitable chamber, might, I have no doubt, be contrived, with due attention to the points necessary for insuring its proper action.

The atmospheric treatment of acute diseases of the lungs, if followed into all its particulars, would form, I think, a very important subject of inquiry. It has been possible only to touch upon such of its chief points as are tangible by arguments, and by it can be so far realized in promise as to offer a strong encouragement to endeavours for reducing them to practice. I cannot but think that experience would disclose important effects from small variations of the artificial climate when acting with certainty, and steadily. I cannot overlook the fact, how changes in the weather, and how the air of particular localities, affect the type of diseases; how different an affection pneumonia itself is in the city and in the country; nor can I doubt that, by due filtration of air, first through dry gauze, and then through a wetted fabric (the latter to serve the double purpose of giving it vapour, and condensing many impurities of a gaseous kind), but especially by the various arrangements hinted at, for carefully regulating its condition as to warmth and moisture, we might find ourselves in possession of a powerful agent in the treatment of acute diseases of the chest. I would hope that enough has been said to preserve these measures from being involved in the doubtful reputation of inhalations. I am quite aware both of the commendations as valuable means, and the denunciations as nearly useless, which the latter have received from the earliest days of medicine. In recent times, we have writers of high respectability, as Doctors Hastings, Weatherhead, and others, in the latter category; while more recently still, we have in Dr. Harwood an advocate in the former, followed again by the writer of these pages, on the opposite side, who believes inhalations, meaning thereby the occasional presentation to the lungs of air modified by any inhaler, can never prove of much value in acute diseases of the lungs. The convictions in favour of an atmospheric treatment of *chronic* affections of the chest which have resulted in whatever of benefit the respirator has afforded to thousands, were not more strong than have long been those in favour of the atmospheric treatment of acute affections of the lungs I have now ventured to advocate. Regardless of any pleasantry which may be excited by the idea of separating a patient's breathing-chamber from his body-chamber, I cannot, with the above views strongly impressed upon the mind, but desire to see the measures suggested carried into effect with every precaution requisite for success.

(To be continued.)

MEDICAL SOCIETY OF LONDON.

Monday, March 21, 1842.

Mr. PILCHER, President.—‘Gonorrhœal Rheumatism, its Treatment, &c.’—Mr. Headland made some remarks on the disease, as he considered very inappropriately called ‘Gonorrhœal Rheumatism.’ It was an affection which in many instances baffled all our treatment, and one which had this peculiarity, namely—in not being peculiar to those persons subject to rheumatism in its ordinary form: one of its most marked premonitory symptoms was a blood-shot appearance of the conjunctiva, followed by pains in the shoulder, elbow, or other joints, soon after the patient retired to rest. He tried various remedies, and the one from which he thought he derived most benefit was that of the iodide of potassium, given in small doses. Even this he looked upon with suspicion in a few cases; it is an affection which requires some months to get completely rid of, whatever remedies you may employ.—Dr. Risdon Bennett asked if colchicum had been tried in these cases, and he was answered in the negative. The treatment of gonorrhœa next occupied the Society, and it was very generally admitted that the treatment was very unsatisfactory and empirical for this very common and prevalent affection, some using purgatives, some injections only, while others relied entirely on nature, and allowed the disease to wear itself out, which, of course, was eventually followed by stricture.—Mr. Clarke said that Mr. Acton says he can cure the complaint in eight days by a nitrate of silver injection; it is necessary to use a glass syringe.—The Secretary said he used a course of purgatives, followed by copaiba.—Mr. Headland spoke of the disadvantages of the ordinary mode of using copaiba, as it mostly disagrees with the patients' stomach.—Mr. Proctor said he was a pupil of the old Abernethy school, and placed very great confidence on purgatives and the antiphlogistic plan of treatment. He often observed a very high state of fever—nay, delirium, accompanying first cases of the disease; and the mother and family were generally greatly alarmed about the *young gentleman's* having a very violent attack of fever.—Some were of opinion that subsequent cases of gonorrhœa were as violent as the primary attacks of the disease; but the general feeling of the Society was entirely opposed to this view, and also to the general *purgation plan*.—Mr. Headland alluded to the *metallic taste* that was very rapidly produced in some cases where the iodide of potassium was administered.—Mr. Elliot went into a very minute chemical analysis of the action of this medicine on the stomach, and alluded to the fact of its being likely to form an iodide of *amalyne* in cases where starch or such other farinaceous ingredients may be used in the aliment of the patient, and hence often neutralize the views of the scientific and learned gentleman who may have recourse to it under these circumstances.—Dr. J. B. Thompson said, with regard to the use of the iodide of potassium, that he had seen its effects produced on the mouth of the patient, an old gentleman, with whom he had been travelling some years ago, when it was only given in the small dose of *two grains*; and the gentleman said he found this *peculiar taste* (referred to) in his mouth in about four hours after it had been taken. It could hardly be supposed then that this rapid action could have been so soon produced through the patient's system. It would appear as if this medicine were capable of causing a *local* and immediate action on the salivary glands, and acutely sensitive mucous tissue of the *mouth* and *fauces*. As to the use of injections, Dr. Thompson could not say anything as far as regarded the *nitrate of silver solution or injection*, never having tried it himself, or seen it tried by any one else; but as far as a few cases could go, he could speak with some degree of confidence as to the use of *creosote* in *rose-water* in the early stages of the complaint, before the inflammation had extended far into the canal of the urethra. His attention was first drawn to it by noticing its very beneficial results in other cases of morbid discharges from mucous *canals* and *passages*, such as the *nose*, *ears*, &c. As to what had been stated regarding the use of copaiba preparations generally, he fully concurred in the frequency of their disagreeing with the patient's stomach, &c.

OUR EMPIRICAL LIST.

We had hoped to have published our present number with April the first for its date, and in commemorating the venerable feast of English fools, to have published the goodly array of empirical knaves whom their ludicrous folly supports. *Diis aliter visum.* Circumstances have come before us which induce us to give the deliberate perillers of their countrymen's deaths a short respite. Many gentlemen who have promised to send lists have not yet forwarded them. Others have expressed their intention of giving us efficient help, but have asked for more time, on the just plea that the question of some men's qualifications is not solved in a moment. A third set of friends have favoured us with lists, but have omitted stamping them with authenticity, by the addition of their names. As we cannot use their communications in their present state, and we feel that we shall be acting better for the great cause we have in hand, by allowing them further time to certify us, in confidence, against any misinformation. In short, although we have received the names of a very large corps of the enemy, we are yet not in a condition to give a complete muster-roll of the whole army, a desideratum which certainly can, and if our prospects are not very deceiving, certainly will be realised. Will those of our friends who have not yet stirred at the good work, now set their hand to it? Will such Medical Societies as have not yet performed this important duty, immediately communicate with us? We earnestly pray them to turn to best account this prolonged opportunity of doing themselves right. The delay used aright, will enable us to strike a blow which will thrill through the whole carcase of English Quackery.

The title-page and index of Vol. 5, in next number. Notices to Correspondents unavoidably postponed.

THE MEDICAL TIMES.

SATURDAY, APRIL 2, 1842.

Quo fata trahunt retrahuntque sequamur.

ON the eve of Parliament we expressed a deliberate opinion that the present session, except as a season of preparation, a period of initiatory discipline, would, on the important matter of Medical Reform, be profitless to the profession. We were not ignorant that the eremitic Mr. Warburton was in the full expectation that that idol of his soul's hatred, Mr. O'Connell, or some less discerning admirer, would benevolently regain him his lost paradise, and allow him a second time to show how entirely his careful attention to our profession had enabled him to misunderstand its interests, and deal heavy blows to his own notoriously good intentions. We were not either unaware that the British Medical Association and Mr. Wakley—a most ominous conjunction of fiery and watery constellations—after months of severe labour, made delightful by a private understanding that the irrevocable fate of the profession essentially depended on every slant or curved movement of their erudite pens, had carefully elaborated some half-dozen square acres of legal chirography, and had them ready cut and dried to become, at a moment's notice, binding statutes of the Imperial Parliament. Neither were we unaware that Sir Benjamin Brodie was the putative father of a bill which Sir James Graham, after mutilating to his own fas-

cinating likeness, had graciously adopted. Yet, on a full consideration of the state of public affairs, the nature of the proposed bills, and the well-known opinions and character of our Medical Brethren, we were forced into a conclusion that this would not be a session to which the profession would ever have to make any very great outlay of gratitude, in the shape of acknowledgments for parliamentary benefits received. If gratitude be but thankfulness for favours to come, the present session, it appeared to us, would pass by and leave us as much cause for grateful feeling as the most barren that ever preceded it.

We have had no cause since to change our minds. Two months have passed, and parliamentary medical reform is just where it was when we wrote. When single ladies have turned the corner, marriage assumes, it is thought, a very problematical aspect. Easter, the corner of parliamentary sessions, has already been turned. The Corn Law, the Tariff, the Income Tax, the Poor Law, are, if commenced at all, but in their initiatory stages; and if Parliament can find time to consider, in addition to these questions, a measure which, at the same time that it has no connexion with party, has nobody outside the house to press it on attention,—why, our legislators are more industrious and pains-taking than any reference to their past history would lead us to suppose.

What is improbable, however, is not impossible, and the profession will do well to keep itself on the alert. Sir James may—if only pro forma—introduce his bill, and it is easy to imagine that if the members show a confidence in the minister proportioned to their ignorance of the profession's position and wants, he may be tempted to steal a march on us, and while we are trying to collect our disunited forces, be enabled to get his bill into a position in which it may defy all our assaults. If our readers would properly estimate the importance of not giving the Home Secretary's manœuvres even a chance of success, they have only to reflect on the two main features of his bill. Sir James, in the first place, legalizes empirical practice. He establishes a public competition between puffing quacks and educated gentlemen, and makes the arbiter of the prizes a Public, who, from their essential ignorance in such matters, must always think most of those who impudently pretend the most. This, as bad for the profession, and worse for the public, we cannot but oppose to our utmost. Again, he legislates for the profession, and forgets that there are such men as General Practitioners. The State was the King in the eyes of Louis Quatorze, the Physicians and pure Surgeons are the Profession in the eyes of Sir James Graham. As the grand monarch overlooked the existence of the people, the Home Secretary has overlooked that of nine-tenths of the community he affects to legislate for. The tragedy of

Hamlet, with the Prince omitted, was yet a decent play. Sir James, absorbed in cementing the incestuous union and usurpation of the two collateral relations, not only omits the Prince, but strikes out all the other *dramatis personæ*.

Another important matter which will certainly call for our united and best attention, is the Act called (by courtesy) the Poor-Law Amendment. Three weeks since we gave the Commissioners' amendment of the Amendment, "being new regulations suggested to them by increased experience." In another column we give their new amendment of their last amendment. Parliament, with its "omnipotence," is yet unable, we are told, to move an amendment on an amendment; the omnipotence of the Commissioners, it would seem, is less feeble. They have improved their perfection of 1836, and, if three successive instances are anything, have solved the important question of the infinite perfectibility of perfection. They have painted the rose, gilded refined gold, whitewashed the driven snow!

It would be as unjust to deny great merit in the Commissioners' last—we mean their very last—regulations, as it would be absurd (irony apart) to attribute to them perfection. Mr. Guthrie's amiable exertions have not, we gladly own, been as fruitless on this especial matter as we anticipated. Our old friend—and we wish our readers to know that personally we feel the greatest kindness towards the good-hearted, open-minded bluff soldier—our old friend, we are pleased to say, has not been jockeyed by the Commissioners to more than about one-half the extent we feared, and in that excellent proportion the profession is the gainer. But much yet remains to be complained of. Why, when introducing an apparent change in the matter, should medical officers be made dependent for their places on an annual re-election, if Guardians only make a note to that effect in the contract, or in their minute book? Mr. Guthrie, poor honest gentleman, says in high glee, "Medical Officers will, on the expiration of the present contracts, hold their places in future subject *only* to death, resignation, or legal disqualification!" Can the Commissioners have given our estimable friend a false version of their document? Their own published explanatory letter, dated March 12, says, "It is not advisable to deprive them (the Guardians) of the power of limiting the period of the Medical Officer's services!" Their schedule of the same date enacts a rule in perfect accordance with this opinion.

Why, again, have the Commissioners not adopted what is obviously, glaringly required, a liberal system of payment per case? Mr. Guthrie told us some time since, that Medical Officers were paid one-half too little; when

* Since the above went to the printer, we have learnt that Sir James Graham has formally announced the postponement of his bill to next year.

last we heard from him, he went further, and told us that he had discovered that they were not paid more than one-third their just due; and he warmly alleged the case of Lambeth, where, to use an allowable tautology, for it is sanctioned by the example of the President of a Royal College, "only eightpence is allowed *per head for each sick person*." We condemn the cruel parsimony—Mr. Guthrie condemns it—the Commissioners condemn it—but have we any guarantee for a change? We fear not. The great, the only recommendation of the present Poor-Law system, is its saving to the rate-payers. To increase the expense of its working, is to stab at its existence; and a stab in that direction, we are told, would not be without its influence on certain very respectable incomes. Let Mr. Guthrie propose anything to content medical men, which will not endanger an increase of rates, or bring a peril of lessened incomes in high quarters, and we will engage for the Commissioners that they will not be slow with the concession. Till then, Mr. Guthrie may quite as profitably amuse himself by microscopic inquiries after the mammæ of barn-door fowl, or physiological investigations into the effect of Mozart's, No. 12, whistled to the nearest milestone.

Omitting mention of the shabby clause which makes it necessary that the medical man should have the certificate of a physician or pure surgeon before he can operate surgically on a patient, or receive remuneration—a clause which, with others, makes Mr. Guthrie, to do him justice, heartily ashamed of the confidence he placed in his "well-meaning friends"—we crave leave to say a word on the important *qualification clause*. Are we *one* nation? Are our national acts of union only the pieces of parchment Mr. O'Connell calls them? If Englishmen with English diplomas are alone to have English Poor-Law appointments, are Irishmen with Irish diplomas alone to enjoy the Irish appointments? If we are to have these territorial distinctions, why shall they not be extended to our own counties? Whatever reason holds good for the larger division of one country, applies equally to the smaller. As Englishmen, we protest against this barbarous retrogression into the practices of a dark age, unexcused as then by divided and antagonistic nationalities. It is a direct violation of the articles of the two unions, and shows the impolicy of having a body in existence like the Poor-Law Commission, which, at the spur of the moment, can repeal the most binding acts of parliament, and make laws running in the teeth of the whole spirit and letter of British legislation. If the Commissioners thought this a bait for English practitioners, or that it would be an apple of discord between the medical men of the three kingdoms, we tell them authoritatively they are mistaken. English Practitioners wish for the most perfect reciprocity of privileges between the whole body of qualified medical men.

They will recognise no distinction arising from supposed difference of kingdom in one empire—the only distinction they know of, is that founded on professional acquirements and professional worth.

The last matter that requires the watchful attention of the profession, is the Lunacy Bill of Mr. Goulbourn. Two Visiting Commissioners are to perform the duties that have been performed by the existing Commission of twenty-five, and the various quarter-sessional magistrates. Their duties are clearly medical. Mr. Goulbourn proposes they shall be performed by barristers. His reason is unique. "Medical men have not those habits of neatness and accuracy which mark lawyers," and therefore lawyers must do the proper work of medical men when it happens to be profitable! Will the profession stand this? We shall fairly give them up if they do.

PENCILINGS OF MEDICAL MEN.

To the Editor of the 'Medical Times.'

Modeste tamen, et circumspecto judicio de tantis viri pronuntiandum est, ne quod plerisque accidit, damnum quæ non intelligunt.

IMPRESSED with the truth of this precept of Quintilian, we propose to continue a series of sketches of the leading lecturers of the metropolis—the lions of medical literature; and humbly imitating the example of Probe, whose classical and sparkling essays appeared in the earlier numbers of your periodical, we will endeavour to give monthly pencilings of those medical politicians and celebrated general practitioners who stand prominently forward, either to advance or oppose the great principle of reform that now agitates the entire profession.

We regret that Probe cannot be induced to resume the pen; we admired his point and power—the happiness and liveliness of illustration; the ease and elegance with which he wrote, the accuracy and fidelity of the portraiture, were generally acknowledged. Our aim shall be, to be equally impartial though less powerful, in bringing out, in bold relief, the striking characteristics of the individual; we hope we may be less severe. The arrow from his quiver occasionally wounded more deeply than the author ever intended.

We will have this advantage; we will be able to view his colleagues and actors on the same stage with a less prejudiced eye; and, having nothing to do with their passions, principles, or interests, and removed from the suspicion of rivalry, we can, with greater sagacity, consider the talents, manners, feelings, and merits of those under review.

We beg to be distinctly understood, that we would not have presumed to make the attempt to follow in his wake, or to assume the title, if he had not positively refused to resume the one or to use the other.

With this preliminary apology and vindication of our modesty, we beg to direct your attention from ourselves to WM. LAWRENCE, Esq., F.R.S.

This gentleman has passed the grand climacteric of life by six or seven years. The grey livery of years begin to give an air of dignity and antiquity to as finely a chiselled and intellectual forehead, as the eye of the sculptor or phrenologist would love to look upon. To judge of the interior by the noble external proportions, the spectator would say at once that it must be a magnificently furnished apartment. It is just such a residence where talent, of a high order, might deign to dwell. The eye which has been so justly described as the window of the mind, is a small-speaking grey eye. There is more of expression than of beauty in it. The face is a little too elongated to be correctly denominated Grecian. He must have been a handsome man in his younger days. He has an agreeable prepossessing appearance now,

were he not to take so much trouble to distort his countenance. There is naturally a redundancy of wrinkle about the lips, which is constantly twisting into every variety of grimace; one moment protruding, then contracting, the lips giving the mouth a peculiar pursiness or fulness; another instant they are thrown into a shape reminding us of a certain part of the economy of the hen, during the throes of parturition, anon wreathed with smiles; in another instant they summon up a bitter and cynical expression, that makes you doubt if a smile had ever been a resident of the same locality, or had the least acquaintance with the proprietor. It certainly monopolizes the right of representation or expression from every other feature in the face, the eye, perhaps, excepted.

He is about five feet nine inches high, square built, lissom, without any unnecessary flesh about him. His legs, in their affectionate anxiety to support the perpendicularity of the frame, curve a little outward, which defect his wide inexpressibles conceal. He is very unaffected in his attire. He saunters along with his head down, occasionally looking fixed, or staring at an object, like all very near-sighted persons. In his demeanour to the students he is polite and affable, and very attentive to his duties. The great defect of English hospital surgeons, taciturnity, he shares in common with others. They now and then perpetrate a witticism, but rarely feel that it is their duty to impart as much instruction as possible to the young men who surround them. They seem desirous to make as much of their knowledge as possible. They sell it in scruple doses; it is dearer than gold. Is it that the article is scarce?

Gloucester has the honour of giving him birth. He brought noble talents to the cultivation of a noble science. His industry was untiring. He soon became a good anatomist, physiologist, demonstrator, and assistant-surgeon to Bartholomew's Hospital. His first commencement in medical literature was auspicious; it won the prize of the College of Surgeons on hernia. His opportunities at the Ophthalmic Institution produced his work on the eye. His operations were remarkable for neatness, imperturbable sangfroid, celerity, and safety; qualities which we question he possesses, to the same extent, at the present day; an increase of years does not give increased confidence, or manual dexterity. Within the last two months, in performing a circular amputation of the leg, from chronic disease of the ankle-joint, upwards of forty minutes were consumed. By the maladroitness of a red-headed, curiously-countenanced assistant-surgeon, the tourniquet loosened, much blood was unnecessarily lost, and much time unnecessarily consumed. We have seen the same operation under similar circumstances, but without the pomp and the parade, "and all the solemn show" performed by an unassuming general practitioner in less than one half the time. A friend whispered in our ear "If this be not bloody butchery, we do not know what is!" We acknowledge we can only form our estimate of Lawrence's character by his public displays; a very bad criterion; for on such occasions public men always appear in their holiday clothes. The introductory lecture is the scene of his glory. The theatre is crowded to hear him. It well repays the trouble of the visit. Here he is as a star that dwells apart from all the minor constellations that would fain approach him. His person, gesture, countenance, and voice are dignified, impressive, and persuasive. No ungainly gesticulation, no overstepping the modesty of nature. A graceful ease, a simplicity of style and statement characterize his opening oration. The words applied by Homer to Nestor apply to him, "Soft fall his words as flakes of falling snow."

There is a clearness of method, a terseness of expression, without being epigrammatic, (for scientific subjects rarely allow that,) a perspicuity in his discourse that make it a pleasure to follow him. It cannot be better done. The propriety of manner that distinguished Charles Kemble, Lawrence has succeeded in acquiring. His very attitudes exhibit the poetry of motion: you would think his very body thought.

His voice is free from that monotony that marks prepared speeches. Every word in that introduc-

tory has been committed to memory, the time calculated, the emphasis noted; the voice attuned like the stops or points of a musical machine—every idea, and the dress in which it is clothed, measured and fitted exactly to please the eye and ear. Yea, even the poor little articles, definite and indefinite, have been drilled, brought on parade, and submitted to a most inquisitorial examination. All this is as it ought to be. It is a proof of industry, of a proper desire to maintain his station at the head of all the living lecturers of this country. It is quite legitimate. It exhibits great retentiveness of memory. Like Shiel's speeches, or Macauley's, we see the polish, the varnish of great preparation. It is true "olent lucernam." But can any of those who prefer the happy extemporaneous inspiration of genius equal, or approach within a hundred miles of such an intellectual effort? Can they produce an article to equal it? Are they aware that our greatest men, Burke for instance, whose ethereal intellect far exalted him above all his contemporaries, whose imagination careered in the clouds, as has been said, even he did not disdain the labor limæ.

The great merit is, that we know it is all art, yet the effort is not seen, the effect is only considered.

Of late years his style has become more chastened, more severe. There is no exuberance of fancy, no flight of imagination, no attic wit, no rhetorical artifice, no cutting irony, none of those ornaments that dazzle and delight. It is the pure spirit of science in the plain and pure and unornamented breathings of a highly cultivated mind enunciating nature's laws, interpreting her indications, and applying and enforcing those rules and remedies which experience has suggested and proved to be conducive to the welfare of our species.

Then came the pathetic, the well-feigned regret of the abuses, the absurd divisions that are fostered and encouraged in the profession to the detriment of science and the public, and of those who follow medicine as a profession.

On these topics he was once the Jupiter Altitonans. The Crown and Anchor and Freemasons' have rung again and again with his fulminations against the monopoly and irresponsibility of the self-elected oligarchy that has usurped the privileges, the power and property of the whole body of its members, who are equally, and in many instances, more competent to govern it than several of those who have by interest, intrigue, sycophancy, and family arrangements, succeeded in wriggling themselves, by the back stairs, into a seat in the council. The earnestness, the enthusiasm of his manner on these occasions would have convinced the most sceptical of the sincerity of his devotion to the emancipation of his professional brethren from the ignominies and indignities to which they are subject.

We believed Lawrence's integrity to be incorruptible. There were some hard-headed, far-seeing old gentlemen who predicted at the time "that he was bawling himself into a berth." Alas! poor weak, erring human nature, they were too correct in their prognostications.

The apostle of medical reform, the lauded, the applauded of the Lancet, the popular Lawrence, the Brougham of medical politics, is offered a seat at the council, is invited to become one of the favoured, the irresponsible few, that he so truculently denounced. Alas! his principles are forgotten, his name sullied, his motives worse than suspected, his fame as a Reformer, as a philosopher, for ever extinguished. "Throw that noisy dog a bone," was the prescription of a wily minister, and a good judge of human nature. His bark was heard no more.

It is even bruited by his own colleagues in this Venetian council, that

— Like Alp the renegade,
He hates the cause which he betrayed;

and that the fiercest foe to reform is its former friend. How many a time and oft have our ears tingled with the music of these indisputable truisms that medicine and surgery were one and indivisible; that they formed a republic, a commonwealth, in which every member should have a vote, where artificial and aristocratic distinctions should

cease, and talent alone reign supreme and be the *vera atque sola nobilitas*.

Shame, pride, honour, popularity, high behest, and all the promptings of proud ambition, where are ye fled? Are the early instincts of a sordid love of gain able to stifle all your noble impulses? Are the prepossessions of interest, or the organs of acquisitiveness sufficient to antagonize and control all your noble emotions? We foolishly imagined that the love of praise was so implanted in our bosoms as an incentive to worthy actions that it is a very difficult task to get above a desire of it for things that should be wholly indifferent or utterly unworthy of our consideration.

We have thought that since his secession from that place of high estate, which his talents so well fitted him, since he went to roost in that dirty nest which he so frequently made us loathe and abominate, he seems to have lost that pride of port assigned to those intent on high design. He feels he has lost, in the eye of the profession, the prestige that attached to his name. He must bear in mind that the opinions which he affected so warmly to espouse, caused no pecuniary sacrifice that would admit of the possibility of extenuation; on the contrary, they introduced him to the favor of the general practitioner, and his fees thereby greatly increased.

The doctrines which he promulgated in his work on the 'Zoology of man,' now admitted not to contain one scruple of purely original matter, bordered very closely upon rank materialism, and excited a great sensation, and brought the author into general notice. It has been said, that if a medical man once succeeds in gaining notoriety, "his fortune is made, he may remain in bed till noon."

Hume, the historian, says, that in a conversation which he had with the witty and eccentric Rousseau, he asked him the secret of his success, and Rousseau answered, to strike and interest the public the marvellous must be produced: that as the heathen mythology had lost its effect, that magicians and heroes of romance had exhausted credulity, now a writer had a chance in religion, metaphysics. This opinion he himself had from Diderot, who advised to "write paradox, startle old opinions, and success is certain." A doctrine that threatened to undermine the foundations of revealed religion, urged by a famous physiologist, startled the weak-minded, and tended to excite a spirit of restless inquiry, that frequently in the strong-minded terminates in open and avowed infidelity. He to whom Lawrence admits he owes every thing, the great Abernethy entered the arena to refute it. Abernethy, with his eccentricity and bluntness, possessed, in an eminent degree, the genius of common sense, and a higher order of intellect than very many of his contemporaries. He had the capacity of generalising particulars, and deducing inferences which he applied to practice; in this contest Lawrence boldly battled for his first impressions, his early convictions.

The young is often wiser than the old head, is an Arab proverb. In its freshness and vigour it stimulates the brain to action; at that period of man's existence, more than any other, greater results are attained; the truth of this proposition we will work out like a problem in Euclid, in our illustrations of character as we go along.

After carefully examining the work referred to, we can aver that the great charge brought against him by the fanatics, viz., that he denied the immortality of the soul, is not proven. His sneers against sacred subjects were unphilosophical, and in bad taste. The metaphysical speculations in which he indulged won many followers. In this there is nothing astonishing; we love those sciences which leave something still to be discovered, and we fix our regard willingly upon a prospective which is never to terminate. In fine, we love the mysterious; learned and unlearned meet on this ground on one common level. Here again the warmth, the energy, the fancy, the sarcasm, the profound research, the vigour of thought, evinced in this intellectual gladiatorship, would convince the most sceptical of the fixedness of his convictions. Lawrence, thou art a Jesuit spoiled! the cunning glance from under thy shaggy and beetling brow, give colour and strength to the supposition. You deceived every one but yourself; as

soon as those doctrines were likely to militate against self-interest, then came a mean, craven, ignominious recantation.

The governors of the Bridewell and Bethlem Hospital feeling indisposed to re-elect him, he wrote to the president and alderman the following letter, whispering lowliness, begging forgiveness, and promising to sin no more. "Experience and reflection have only tended to convince the more strongly that the publication of certain passages in these lectures was highly *improper*, &c., promising to withdraw them from circulation, and not only never to reprint them, but also never to publish anything more on similar subjects." This letter, contrasting so strongly with his celebrated reply to Abernethy, lay him open too to the suspicion of the most mercenary motives, we must not comment on. We still admire him, although he has fallen from his estate. He is the most scientific surgeon, and the best lecturer in the metropolis; he has amassed great wealth. We hope he may live many years to enjoy it.

PROBE.

ON MR. BRAID'S EXPERIMENTS.

My dear Sir,—I send you the following remarks, in reply to your request, that I will state to you the impression left on my mind, by what I heard and saw at your lecture, and learned from you in conversation afterwards. I am satisfied, from the phenomena exhibited by Mr. Walker, (was not that his name?) and from very close observation of one of the young persons, who was rendered by you apparently insensible, that the condition of the nervous system, which you produce in your patients, is the same with that obtained by the mesmerisers, and which has been called by different writers magnetic sleep, mesmeric sleep, sleep walking, somnambulism, mesmeric trance, &c. The term which I would recommend to denote this state, is the 'exoneural trance,' being disposed to arrange all the former knowledge of the nervous system, and the facts of that order to be afterwards discovered, under the head of 'exoneural;' and to group the other phenomena, such as those elicited by yourself, including what shall be proved true in mesmerism, under the general head of 'exoneural.' Ordinary somnambulism—the wrapt state produced in some by undue religious excitement—the condition of the nervous system in catalepsy, and in some other nervous and hysteric seizures—will, I have no doubt, turn out to be slight modifications of the same state, of the exoneural trance, into which it seems that you are able so easily to throw so many persons. And I cannot help observing, in favour of the pursuit of this inquiry, that the extent to which you and others have already shown, that certain nervous disorders may be put an end to, or mitigated, by inducing the exoneural state artificially, enable one confidently to hope, that we shall soon be in possession of new and compendious means of benefiting this class of maladies more effectually than our art has hitherto accomplished. The same cures which you effect have, indeed, before been made by the ordinary process of mesmerising; but that process is so extremely tedious, occupying for the first sittings in general from half to three-quarters of an hour, as, joined to the uncertainty of producing any effect after all, practically to wear out the patience of experimenters, and to prevent the method advancing, either as a subject of inquiry, or its being brought into general use as a curative means. It took up too much time. What you appear to have done is to have found out a method, by which, in five minutes, the susceptibility of any given individual towards the exoneural trance may be determined (or, at all events, by the repetition of the same brief process, a few suc-

cessive days.) Then comes the question, how your effects are produced. Judging from the little I saw, and more from the facts which you narrated, and upon the accuracy of which my acquaintance with you, however brief, persuades me that I may implicitly rely, I am disposed to believe that you have discovered, that the exoneural trance may be induced in those who are susceptible of it, by fatiguing the attention, by forcibly keeping it fixed upon one sensation, especially if the parties, instead of resisting, favour and encourage the feeling of stupor, which any one may observe, has a disposition to creep upon him, when he tries your experiment of looking fixedly at an object as you direct. And it appears to me probable, that the exoneural trance of religious excitement, sometimes exhibited daily for years, may have been unintentionally kept up, originally, perhaps induced thus mechanically by the strained upward eyes, and simple contemplation of some vague image in religious ecstasy. It is likewise far from improbable, that, in many, possibly in all, the cases of the exoneural trance produced by the ordinary manipulations of mesmerism, the effect produced is to be accounted for in a similar manner; the attention of the patient, in the progress of the monotonous movements of the mesmerist, becoming languidly arrested and fixed upon some object of sense, and the mind then and thus slipped out of gear. Likewise I am quite disposed to admit the justice of your remark, that many of the phenomena displayed by persons in the exoneural trance depend upon an increased range and quickness of ordinary perception, which they gain in some respects in exchange for the superinduced dulness of common feeling. But, on the other hand, I am perfectly certain, from facts which I have myself witnessed, that, when in the exoneural trance, a patient is susceptible of impressions and manifests powers which do not admit of being explained on the supposition of any known faculty being rendered more acute than ordinary (as the hearing is by opium, while more or less general stupefaction is present). And I believe, with Cuvier, that when in that state a person may be influenced by the nervous system of another, through some channel as yet unexplained, or inquired after. And, therefore, I am not prepared to say, but that in the ordinary mesmerising process, the same influence may not be in operation over and above that, which I think you have shown is sufficient to bring on the exoneural trance. Nor am I at all sure, that you do not yourself, in the management of your patients, frequently without suspecting it, employ the same agency. I think it must now be evident to any unprejudiced person who listens to what is asserted by men otherwise of undeniable credit in professional matters, that there exists a hitherto unexplored field of nervous agency, the investigation of which will lead to some most striking discoveries; which it is equally evident to those who have looked most deeply and attentively into the already explored regions of the subject, that the inquiry is quite in its infancy, and that we must be satisfied for the present with carefully verifying facts, and not dream for a moment of any thing like a general and satisfactory explanation of the principle on which they will ultimately be found to turn. If, as I believe on your statement, you are able to throw in two or three minutes a great many out of a mixed assembly into the exoneural trance, you are in the position like that of the polarity of the needle; you may at once use it beneficially; but it will be the province of some one, 300 or 400 years after you, to explain how you produced your results.

HERBERT MAYO.

2, St. James's Place, London, March 5th, 1842.

UNQUALIFIED PRACTITIONERS.

To the Editor of the 'Medical Times.'

SIR,—Professional engagements have so completely occupied my time, that I have been obliged to defer until the last moment any communication which my duty as a member of the profession seems to call for.

I, like perhaps the great body of us, have hitherto been merely lookers on, but the present state of affairs would, I should think, arouse the most apathetic; certainly we have only ourselves to blame, unless we individually unite at once to afford every information to those who are endeavouring to redress our grievances.

The Druggists' Association has extended its ramification into every part in this rural district, and each have, I understand, contributed their two guineas subscription "to uphold their rights;" and they appear, if I may judge from the observations of one or two, cordially to unite in supporting their chief leaders in London in their objects.

How different from the different associations of medical men in this part of the country! The Stroud and Gloucester Medical Associations are disliked by the most respectable members in that city, in consequence of the petty quarrels and jealousies manifested by the members, and consequently does no good.

The chief illegal practitioners are druggists, and although none are within four miles and many seven miles distant, I will mention their names as perhaps other correspondents may omit them. Tyes, a druggist of Stonehouse, practise considerably—(there are two medical men in that village); and Smith, in a village adjoining, viz., Stanly, is another; he is not a druggist, but he practises and quite upsets that part of the Factory Act relative to obtaining certificates from surgeons for children as to their physical state according to their reported age; the parents always want certificates of their being of the usual strength, &c., of a child of thirteen years old not nine, even if the child be that age, and they never will tell the truth; of course it is refused; they go at once to Stanly to this man, who grants one for a shilling, and the manufacturer laugh at our refusal. There are besides Price, Lovat, and Rose, in Gloucester, who practise extensively, so much so that their own fraternity even say they don't approve of its being carried to such an extent; but your subscriber in Gloucester will, I doubt not, extend the list.

I may now mention that the Poor-Law Commissioners are redeeming the promise made to Mr. Guthrie, and mentioned in your paper some weeks since, as fresh medical orders arrived at the Board of Guardians for the Union on Friday last, and it appears to me to be quite a fair removal of the grievances complained of; the amount per case is not yet decided on.

I trust this hasty scrawl will be excused, as I fear I shall not have another opportunity, until it is too late for publication, of again sending to you; and begging that in any use you may make of this you will retain my name in confidence, and also residence, as it might expose me to much injury.

I beg to remain, Sir, your's faithfully,

March 28th, 1842.

P.S.—The Cheltenham practitioners have prosecuted a druggist in that town. His case comes on at our assizes this week.

[We have inserted this letter as a sample of some hundreds we have received, and as showing the spirit in which all qualified practitioners should act in meeting the dishonest pretensions of druggists and quacks. We do earnestly hope that the gentlemen who have not yet sent to us will feel the urgent importance of supporting us in our efforts to give empiricism the severest blow it has yet received.—ED.]

PROFESSIONAL QUACKERY.

To the Editor of the 'Medical Times.'

"Row brothers row."—SONG.

SIR,—Your journal is ever open to the exposure of impudent and gross quackery, whether in *qualified* or *unqualified* men, and the "Medical Times"

has never yet shrunk from the task of exhibiting unmasked, the petty, paltry, unworthy means occasionally resorted to, by even professional men, to extend their practice, and proclaim their extraordinary and meritorious deserts to the world.

It is painful enough to all respectable members of the profession, to see a set of ignorant, unprincipled quacks, blazoning forth their impudent advertisements, supported by fictitious names, and intended to deceive the public, by leading the said public to believe, that the very advertisers possess many of the most eminent and scientific surgeons and physicians of the day as their patrons, and who advocate the employment of their nostrums.

But, Sir, there is another evil spreading more rapidly daily, and extending its baleful influence over the medical profession, which requires checking in its growth. I mean the system now, alas, too frequently adopted, of physicians advertising their own performances and astonishing cases to the world, through the medium of paragraphs in the London daily and weekly papers. And who, it may be asked, are these physicians? Graduates of foreign universities, Scotch Doctors, or even some unprincipled licentiates of the Royal College. No reader, none of these, but men who lay claim to the honourable and high sounding title of "Fellow of the Royal College of Physicians!" Men who have received an English University education; men who hold in supreme contempt all not of the same rank in the profession as themselves; men who believe their own dogmas and opinions infallible, and believe none honest who dare to differ from them.

For the benefit of science and the advantage of the profession, I beg to transfer the following paragraph from the "Sunday Times" newspaper to your columns:—

"EXTRAORDINARY OPERATION.—Some days ago, a young woman was brought into Westminster Hospital under very distressing circumstances, having overstrained herself and burst an artery, through which every particle of blood escaped from her body; after losing more than a pailful of blood, she was placed in the Adelaide-ward in the full expectation of her dying within a few hours. A consultation having, however, taken place between Dr. Roe, of HANOVER SQUARE, Dr. Bright, and five other medical men, it was determined to attempt transfusion of blood from healthy persons into her body. The first experiment was made in the presence of the above named, when a healthy young woman was bled and the fluid transferred to the veins of the patient. Thursday last the same was renewed, and on Friday, the reverend chaplain of the hospital permitted himself to be operated upon with the same view. Yesterday (Saturday) the patient, though, of course, in a very weak and precarious state, gave considerable ground of hope. This is the second occasion upon which the operation has been performed in Westminster Hospital; on the former occasion the transfusion was completely successful.—*Sunday Times*, March 27, 1842."

Now, Sir, I should like to ask the *fellow* mentioned in the above paragraph to explain how reporters obtain so correct a knowledge of what occurs within the walls of the Westminster Hospital, when even the *house-surgeon* and *pupils* are ignorant of what is doing, and those engaged in the operation tax their ingenuity to conceal what is going on from all but themselves.

I must plead youth and ignorance, and leave the question to be solved by a wiser head than that of a

JUNIOR STUDENT.

March 28, 1842.

[We insert this note with much less faith in the *youth*, *ignorance*, and junior studentship, than in the other statements of our correspondents. Can Dr. Roe really have descended to the concoction of such a paragraph? The special mention of his residence, we regret much to think, certainly raises a suspicion, which calls for his most decided disclaimer.—ED.]

BANDAGES.

To the Editor of the 'Medical Times.'

SIR,—In reading over a letter in your valuable journal from a Mr. Thomas, recommending the application of a bandage in midwifery practice, it

seems to me a matter of deep regret that a point so essential should require, at the present day, to be urged upon the accoucheur. The use of it is long familiar to those who have gone over to Dublin to study that branch of the profession, where an institution and opportunities exist for acquiring knowledge unequalled in Europe. Every one is taught there to apply it himself; and in after practice the man who left it to an ignorant nurse would be considered by the profession as having grossly neglected his patient.

To the non use of it may be ascribed many of those fatal cases we daily hear of; while the imperfectly contracted uterus in others causing unnecessary hæmorrhage and protracted debility, ought to make the practitioner who omits it blush. I fear, however, the three-corner application of it by Mr. Thomas must prove most irksome to the patient, and not half so effective as the broad roller, *well secured* at the hip, *very tightly drawn just above* the contracted uterus, over which and the abdomen it otherwise produces a uniform pressure and agreeable support to the patient. Of course the left-hand should follow down the contracting uterus during the expulsion of the child; when, immediately after its separation, the nurse's hand having replaced your own, to enable you to effect that object, the bandage should be applied, and finally re-tightened on the coming away of the placenta.

WM. H. HAWKEY, M.D.

34, Burton Street, Pimlico, March 21, 1842.

ROYAL COLLEGE OF PHYSICIANS.

Wednesday, March 2, 1842.

LECTURES ON MATERIA MEDICA.—NO. III.

By DR. ROUPELL.

AFTER a short recapitulation of some of the subjects of the last lecture, the lecturer said, that a question had arisen as to what plant the name colchicum ought to be restricted; for it was known that in former periods the root of an uncertain species of iris had been substituted for it, which was now not in use. There were several precautions in the employment of this remedy to be attended to, the common dose acting beneficially in one case, will act too powerfully in another, and death might be, and had been, the consequence of an overdose. It could not be used too cautiously; the dose of m. xxx. of the tincture had been known to produce unpleasant symptoms. By the study of the action of medicines, by improvement of their preparation, and by the rapid progress of chemistry, especially in analysis, our knowledge was every day becoming more accurate. It was but a very few years ago, that members of the profession could not be brought to believe that there was any distinction or separation of action between sensation and motion, and it was confidently asserted, that by destroying the one the other was destroyed; but by an improvement in our knowledge resulting from subsequent discoveries, we could now demonstrate not only the separation and *difference of the functions*, but we could point out the *different nerves* which were the organs of such different functions. These discoveries had given an important aid to the study of the actions of medicines, and when we considered the progress that at the present time was making, we could not but anticipate the happiest results. The perfection to which chemical processes had been brought, gave us reason also to hope that the attention to the action of the uncombined principles, so many of which were now so beautifully prepared, would throw much light upon the action of medical agents; this led to the notice of the principle which had been very recently discovered in the next root to come under consideration, viz., the

Berberus Vulgaris. The common berberry was remarkable for the peculiar irritability seen in the flower. If an insect entered it, the stamina became excited, and contracted so as to throw the pollen from the anther upon the stigma,

showing what an important part bees and other honey-seeking insects may indirectly perform in the process of vegetable fecundation. The root was bitter and yielded a yellow dye, as well as an essential principle, termed "*berberine*," of a yellow colour and very bitter taste.

Bryonia Dioica was first used from a fancied resemblance of the shape of the root to the human form; it had long been placed in the list of materia medica, and had been administered in uterine affections, suppression of the menses, also as a purgative and emetic, for the latter of which purposes it is recommended by some of the earlier medical writers. Pessories had been made of the root, and great efficacy was attributed to it, when taken internally, for the relief of chest affections, and for bringing on the expulsion of the placenta. Its appearance was familiar to all, ornamenting our hedges with its red fruit; but of its use as a medicine very little was known; it contained an active principle that had been named *Bryonine*. It was a curious fact noticed by De Candolle, that the juice of the sort of all the biennials of this natural family (cucurbitaceæ) were acrid and often dangerous, while the annuals were free from any active properties. Starch existed in large quantity in this root, and was made use of during the French revolution to afford that substance for food when the restrictions were placed upon the sale of bread.

The Calumba, (coccus palmatus.) The appearance of the root was well known in its sliced forms, when dried in round pieces. Starch constituted one-third of its weight. It was by its presence detectible by iodine that true calumba root was known from a root often substituted for it. It is one of those roots which contains a bitter principle *not* united with tannin. Hence it is the bitter used when chalybeates are to be exhibited, since no black colour is produced by those which contain no tannin, while the contrary is the case where that astringent is present. The salts of lead and silver alone are decomposed by it. The salt containing its active principle is very easily obtained by evaporation from the alcoholic solution of the root, removing the colouring matters in the usual way. Here attention was called to great advance in the case with which these could now be procured, and the several facts stated showing the probability that the production of many of the proximate principles would be artificially effected; from the action of nitric acid on indigo, artificial tannin, carbazotic acid, (or a substance very analogous) and resin had resulted, while the product of passing a stream of hydrochloric acid through the essential oil of turpentine, was artificial camphor, of which a most beautiful specimen was on the table; the acid here seems to act the part of oxygen. Sugar could be made by the action of sulphuric acid on vegetable matter as old rags.

The contrajerva had received its little *dorstenia* from a German physician. It was recommended as a remedy against poisons. Our wonder will not be so great at the multitude of remedies for that purpose, when we recollect that in the olden time, poisoning was the means adopted to account for all sudden deaths that the limited knowledge did not give them the power of accounting for. It was more recently introduced here by Sir Francis Drake, though few navigators had done much for the advance of materia medica.

Carenum or Turmeric root, was of two kinds, the Indian and Chinese, of which the latter was the best; it was darker in colour than the former, with a more resinous fracture and aromatic odour; it was used as a test for alkalis, as a condiment, and as a dye: taken internally it communicates its colour to the urine and evacuations.

Delphinium Staphisagria.—The root of this plant was now seldom used, as the seeds were found more available. Its action depended upon an active irritant principle. *Delphinium*. This plant was fatal to small insects and domestic vermin.

Gnaco.—This substance was introduced by Sir Robert Kerr Porter, as a remedy for hydrophobia, but like all the remedies intended for that purpose had been useless.

Elaterium.—The juice was now used instead of the root. An extraordinary difference in the quality of the modern extract from that formerly used, must exist since the writers of those times speak of giving five or ten grains, or even a scruple. A similar dose of the modern extract would be fatal.

Aspidium Filix Mas had been used as a remedy for worms, being followed by purgatives. Its efficacy has been attributed to its astringent property, and if this was correct, tannin would be a most valuable remedy; the experiment would be an interesting one. It had been imagined to produce abortion and sterility. The roots of a species of fern were, according to Captain Cook, used instead of bread in New Zealand at the time of his visit there.

Gentian was bitter, antiseptic, and tonic, and was much more used formerly. It was a valuable remedy in dyspepsia, &c., but was found not to have the imagined advantage in the treatment of agues. It is principally used now in combination with aromatics. It contained two essential principles; the first had been named *Gentianine*, the other was a bluish glue-like substance. No tannin was to be found in it. Gentian root contained sugar sufficient to allow of fermentation. Cullen used it in intermittents; this drug was imported many years ago, mixed with the root of another plant now supposed to be a variety of henbane, the administration of which was attended with very disastrous results, being a powerful narcotic. The distinction would be made by the least attention and care. An account of this noxious adulteration would be found in the 'Philosophical Transactions,' Vol. xlv., 1748.

REVIEWS.

Hydropathy; or the Cold Water Cure, &c.
By R. J. Culverwell, M.D., &c. London: Sherwood & Co.

THIS is a species of streamlet from the Graefenberg water-works of Mr. Claridge, which we had occasion to notice a few weeks back; and as water always finds its level, it is to be presumed it will glide ignobly onwards to the lake of oblivion, which so considerately receives into its capacious bosom all that innumerable class of meaningless, useless, aimless productions like this "cold water cure," and for ever conceals them from the light of day, while it shields their authors from the ridicule and contempt of posterity. Dr. Culverwell's object, however, is not to recommend cold-water drinking, or cold bathing, but warm bathing, and his own baths. Grafting, therefore, this scion of hydriatrica upon the popular fallacies of Priessnitz and Mr. Claridge, was an ingenious plan to let the public into the secret of the doctor's whereabouts, and the value of his vapour and other baths, and under such circumstances we give him credit for his ingenuity, and wish him joy of his new bantling. But the query is, will this *brochure*, as he himself calls it, add one iota to the knowledge already possessed by the profession, and the public in general, of the utility of the bath, the wholesomeness of cold water, the propriety of cleanliness, the gratefulness of clean linen, and the other innumerable and almost nameless comforts resulting from the frequent use of an element which, as being per-

haps the most universal, is at the same time the most necessary, and that without which we can neither live, nor breathe, nor have our being? Was it necessary that Dr. Culverwell should expend pen, ink, and paper, perpetrate a pamphlet, put compositors, pressmen, stitchers and bookbinders to bodily toil, and himself, we suppose, to personal expense to let us know that he has an uncertain quantity of boiling water always ready in a certain narrow locality in the city, which, in exquisite irony, is called Broad Street, when an advertisement in any of the daily papers would have circulated the fact among tens of thousands, at half the expense and trouble, and without putting us to the pain of recording our dissent to the tone and tenor of his pamphlet, nay, to the very animus which dictated the composition of its pages? When a gentleman puts, and has a right to put M.D. after his name, as we presume Dr. Culverwell has, we expect, and demand from him such a line of conduct as accords with the general notions which all thinking men, in and out of the profession, entertain of the true character of the physician—namely, gravity, learning, science, good sense, self-denial, freedom from mystery and mysticism, and a thorough mastery over the passions and weaknesses of our common nature. But are the following passages evidence of the character we have just sketched?

The history of the practice of physic affords as many instances of changes of customs and of systems, both practical and theoretical, as we observe in the government of kingdoms and colonies; and yet the world rolls uninterruptedly round, people live and die, and princes and physicians flourish and decay. "New customs, though they be never so ridiculous, nay, let them be unmanly, are followed." But, as the fool says in the play, [and why not Dr. Culverwell?] "Here we are." What next, Mr. Merryman? The world is water-mad, &c.—(Prelude, p. 1.)

Really this puts us very much in mind of Mr. Ephraim Jenkinson, when he somewhat confusedly, though very learnedly told the Vicar of Wakefield that the "cosmogony of the creation had puzzled philosophers of all ages," and then contrived to "lug in head and shoulders," Sanchoniathon, Ocellus, Berosus, Manetho, and other obscure and not generally read authorities, to the no small wonder and infinite admiration of the simple Mr. Primrose. There is a farce also by Mrs. Inchbald, called "Who's the Dupe," where one of the characters is made to talk of "the terrene moon illumining the vast expanse, and the heterogeneous matter of calcareous particles disseminated by the obscure influence of irradiative semina, consummating and securing the formation of primordial entities," or some such verbosity; may we venture to ask our author if he has read and studied the above-mentioned characters? We cannot see why, "because the history of the practice of physic affords instances of changes of customs and of systems," that the world should not roll round, or that people should not live and die, or that princes and physicians should not flourish and decay? Yet Dr. Culverwell seems to infer, that because revolutions in the theory and practice of physic have occurred, and will occur again, that therefore the world should not roll round uninterruptedly. This is not the way to treat a grave subject like that of the cold water mania, which, from its very obvious simplicity, is calculated to do, and we affirm has done, and will do incalculable mischief. Again, the title of the pamphlet, "Hydrophobia, or the Cold Water Cure," is a misnomer, and is expressly framed to deceive. So far from recommending cold water, as Priessnitz does in every and all cases, the author says, that "independently of laying myself out to talk with the weary and afflicted over their aches and 'rheumatics,' and other

troubles, and having been engaged in *that sort of pursuit* (!) for upwards (by the time this brochure will be printed) of twenty years, I am largely interested in the success of an establishment 'yclept the City Bathing Rooms, (formerly the Lothbury,) where water—simple water, as simple and pure as London can afford—forms the chief article of consumption, and that I differ from Mr. Priessnitz principally in terms, my material being served up *hot* instead of *cold*." (pp. 11 and 12.) This is curious reasoning; because the doctor talks with the weary and afflicted over their aches and rheumatics, he is largely interested in the success of an establishment 'yclept the City Bathing Rooms, formerly the Lothbury? What a sequitur! Because Dr. Culverwell calls on Mrs. Jones, or Mrs. Smith, or Mrs. Anybody, and talks of their bunions and corns, their bile and their ill-humours, he is largely interested in certain caldrons of hot water in Broad Street! "What next, Mr. Merryman?"

We do not find, in the entire pamphlet, one line, or one hint, that plentiful draughts, or indeed water in any quantity, is a cure for even ordinary thirst, induced by waste of the fluids of the body. On the contrary the author "contends that all things (drinks?) were given us for our use, if we abuse them the fault lies at our own door, and not in the grape or the barley." (pp. 13 and 14.) Here, then, we suspect the difference between Dr. Culverwell and Vincent Priessnitz is greater than the former seems to be aware of, and that like the monomaniac who fancied he was cousin-german to the moon, he is still a long way from his supposed collateral affinity. However, let us not be over-captious, and in quarrelling with the doctor's style forget that some parts of his pamphlet at least (particularly the case mentioned at p. 64) are worthy of a formal notice. We pass over the remarks on what Hippocrates and Galen said, and extract a case as given by him from Sir John Floyer's work on Cold Bathing, published so long ago as 1701, which will show that Priessnitz is not quite so original in his absurdities as his disciples seem to think. We abridge the case. The patient was thirty, suffered much from excesses, and shunned society. He was ordered to retire to the country, find out some very cold spring or river, and plunge in, "come out, and then put on his apparel." He was also to sit up to his waist in water as long as he could comfortably endure it, night and morning; to drink nothing but new milk and water for breakfast for a month; at noon to eat well-roasted mutton, and drink spring water; and at night to apply wet bandages, but on what part of the body we are not informed. In less than fourteen days this patient was as well as ever he was in his life. (p. 24.) It is necessary here to compare the propriety of the regimen with the hydropathic treatment; no credit whatever is given for regular hours, change of scene, the dawn of hope in the patient's mind, the suitability of the diet, or the complete revolution of habit. The cure is ascribed to cold water, the excellent four-year-old mutton and new milk being put quite out of view! "At my birth," says Glendower, "the front of heaven was full of fiery shapes." "So would it have been," replies Hotspur, "if your mother's cat had kitten'd." So we say, that this patient, as well as those of Priessnitz, were *their* diet as carefully attended to, would have recovered, and we believe more speedily, had they drank sherry or good brandy with their water instead of rain-water. They recovered in spite of the water, not in consequence of drinking it.

It is but justice to the cold-water doctors to state that we are acquainted, through a highly respectable naval surgeon, with an extraordinary case of a Jew, living some time since in

the little Island of St. Thomas's, who *slept every night in a trough of water*, for it could not be called a bed, and he declared to our informant, that the luxury and comfort derivable from his aqueous couch, was inexpressible. Here we have a peculiar constitution and habit of body which would seem to have required in that warm climate an aqueous atmosphere; but does it follow, that because this Jew's habit of body was so acrid, or siccid, or inflammatory, that he required to be always in water, that every christian should follow his example? The worst of these self-taught, or rather we should write, "uneducated" men, like Priessnitz, is, that because it happened that such and such a person recovered from such and such a disorder under certain treatment, they fancy that all diseases in all persons, however dissimilar in mind, custom, habits or idiosyncrasies, are curable by the same means.

But we are losing sight of "the City Baths, late the Lothbury." The directions for cold bathing are not amiss; but we beg to caution every one who may read this pamphlet, from following the advice to corpulent persons, or others, that "the body may be suffered to fall horizontally" into the water. This is not only a painful, but a very dangerous mode of entering a bath, whether in the open air or under shelter. The resistance which the water offers to the body is very great, and the pain caused by coming in contract with it is scarcely less than that received in falling on a solid body. We are quite sure Dr. Culverwell has never made the experiment, or he would not have given such advice. With respect to other portions of the pamphlet, they present an odd assemblage of trite truths, ill-digested facts, and some assertions destitute of foundation. Among the latter is one so totally untrue, and yet so generally affirmed, that we are not surprised that Dr. Culverwell, who seems to hope success "from lofty periods, and confident assertion," should have fallen into the common error; but at the same time when a physician *does* write a work condemnatory of another, it behoves him, before he makes a statement, to satisfy himself that it is the truth. Thus, in a note (page 55) he says, "Webb's soda-water *certainly does contain soda*." The fact is, and we speak advisedly, and on the authority of one of the first chemists in Great Britain, that none of the so-called soda-water contains one particle of soda, whatever the manufacturers may say to the contrary. The gentleman to whom we allude, and who is professor of chemistry in a Northern University, actually instituted experiments on the various soda-waters (so called) of commerce, with a view to the settlement of the doubts which had been raised by the rival manufacturers themselves, and after very elaborate and careful manipulation, could not discover one particle of soda whatever in any of the specimens he had procured expressly for the purpose. Persons who know how the soda-water so called is made, and are acquainted with the ingredients from which it is obtained, require not any information on the subject; but as there may be some of our readers who have not paid any attention to chemistry, for their information we mention, that *common lime* and *sulphuric acid* are the two agents employed in the manufactory of soda-water, neither of which contain one particle of soda. In conclusion, we may say, that as an attempt to put down the very obvious absurdity of the cold-water mania, we must look upon this pamphlet with a favourable eye; but when we think of the style and tone, we cannot help thinking that the old adage *non enis homini contingit adire Corinthum*, is not applicable to Dr. Culverwell. It is one thing to keep baths in Broad Street, and another thing to write a work.

THE NEW POOR-LAW MEDICAL REGULATIONS.

THE Poor-Law Commissioners, "varii et mobiles semper," have since the publication of the medical regulations contained in their very recent "General Order," agreed on a new set of a much more liberal and comprehensive character. We give a complete abstract.—First, tenders may still be advertised for, but the district must be named, (its extent we presume,) and the remuneration fixed for it by the Commissioners mentioned.—Secondly, all medical salaries shall be disallowed which are not in precise accordance with the rules and regulations of the Poor-Law Commissioners; this extends, of course, but to the districts under the Poor-Law Amendment Act.—Thirdly, to be a medical officer, a gentleman must have one of the following qualifications:—First, a diploma from the Royal College of Surgeons in London, together with a degree in medicine from an university in England, legally authorized to grant such degree, or together with a diploma or license of the Royal College of Physicians of London; secondly, a diploma from the Royal College of Surgeons in London, together with a certificate to practise as an apothecary from the Society of Apothecaries of London; thirdly, a diploma from the Royal College of Surgeons in London, such person having been in actual practice as an apothecary on the first day of August, one thousand eight hundred and fifteen; fourthly, a warrant or commission as surgeon or assistant-surgeon in her Majesty's navy, or as surgeon or assistant-surgeon or apothecary in her Majesty's army, or as surgeon or assistant-surgeon in the service of the Honourable East India Company, dated previous to the first day of August, one thousand eight hundred and twenty-six. There are two exceptions allowed: gentlemen "duly licensed," yet without any of the above qualifications, may be retained, if now in office, on obtaining special leave from the Commissioners; or such persons are eligible, even if not now in office, provided there be no possessor of the stipulated qualifications procurable, and leave be granted by the Commissioners on a representation of the Board of Guardians made to that effect. The Commissioners say that their object was to limit appointments to qualifications from an English source.—Fourthly, guardians are made incompetent to assign one medical officer a larger district than an area of 15,000 statute acres, or one with a larger population than 15,000. Gentlemen appointed to larger districts, are left untouched till their twelve months be expired; if appointed for a longer period, they will be left alone till the 25th of March, 1843, or till the shorter time intervening the expiration of their term. Smaller districts may be assigned with the approval of the Commissioners. Wales is excepted from this rule; seven miles is there fixed as the utmost boundary of a district from the residence of the medical officer.—Fifthly, the regular stated salary is not for the future to include remuneration for operations, and some other services to out-door paupers. The extra payment will be five pounds for amputations of leg, arm, foot, or hand; the operation for strangulated hernia; the operation of trephining for fractured skull; treatment of compound fractures of the thigh; treatment of compound fractures or compound dislocations of the leg: three pounds for treatment of simple fractures or simple dislocations of the thigh or leg: one pound for treatment of dislocations or fractures of the arm—rates of remuneration, which will, however, include the supply of all kinds of apparatus and splints. This remuneration is not to be given when the patient dies within thirty-six hours of the operation, where the officer has not given several attendances after the operation, or where before the operation of trephining or amputation, he has not received (at his own cost) the advice of some member of the London College of Surgeons, or London College of Physicians, with a written certificate testifying that such operation is advisable. Trusses are to be supplied by the medical officers at cost price, and paid for by the guardians. Accouchements, if of a common kind, are to be paid for at the rate of ten shillings each; if of a very difficult character, at the rate of two pounds; and any disputes as to the officer's title to the larger sum, to be settled by the Commissioners.—Sixthly, the officer to keep a book

naming the circumstances of his visits or attendance, or the name of the gentleman who substituted him, and every such officer within twenty-one days of appointment, to name to the guardians some legally qualified practitioner who may supply medicine and attendance during his absence.—Seventhly, a list of the permanently sick and disabled paupers to be made out every six months by the guardians, and who are to furnish a copy to the medical officer, and such persons shall receive all attendance without any order, on merely showing a ticket signifying that they belong to the list. Applicants without good grounds will be excluded from the list.—Eighthly, all properly appointed officers are to continue in office *dum se bene gesserint*, unless their appointments shall have been for a fixed time, and been entered on the guardians' minutes, or expressly inserted in a written contract.

Such are the new regulations, disengaged at some trouble from the legal complexity in which we found them.

THE STUDENTS' NOTE-BOOK.—FASCICULUS IX.

By ANATOMICUS.

Diseases of the Eye (continued).

Ptosis, is an inability to raise the upper eyelid, and may depend on a variety of causes. In some, it depends on excessive distension and inflammation, accompanied or depending on paralysis of the levator palpebræ superioris. Hypertrophy of the eyelid and relaxation of the integuments, a complaint not altogether uncommon, and occasionally inducing entropium, is one of the causes, and is generally treated in the same manner as a slight degree of inversion, by removing an elliptical fold of the integument, and bringing the edges of the wound together by one or two sutures. The disease is sometimes congenital, in which case the eyelid either presents a natural appearance, or is rather wasted. Traumatic ptosis may be caused by a laceration or transverse division of the levator muscle, or of the nerve supplying it; in either case, the muscle is rendered incapable of acting, and the mere removal of a fold of the integument will be of no use. Atonic drooping from weakness of the levator muscle may be combated by topical stimulants, general tonics, mechanical support, and electricity. Ptosis from palsy of the muscle occasionally occurs, either idiopathically, or as symptomatic of a less partial, and also of general paralysis. In the latter case, the treatment of the drooping will depend on the plan pursued for the relief of the general disease. In the former, local stimulants, blisters dressed with strychnia applied near the part, tonics, when required by the state of the system, sudorifics, electricity, and galvanism, are considered useful. The eye looks dull, the iris less irritable, pupil dilated, and the eye frequently anasarcatie. Ptosis is generally symptomatic of disease of the brain. Paralysis of the orbicular muscle follows operations performed near the parotid gland.

Syphilitic ulcers of the Eyelids.—Cases are occasionally seen in which chancre, exactly resembling those which show themselves on the prepuce, &c., appear on the eyelids, either on the integument, or sometimes affecting the conjunctiva. The conjunctiva covering the ball has been similarly diseased. The ulcer can, in general, be traced to actual contact of the venereal virus with the part affected. Mercurials must be used for their removal, in the same way as for the cure of chancres in other parts of the body. It will be also necessary to use local applications, such as the black wash, the yellow wash, a solution of the argenti nitratis, &c. The following formulæ will be found useful in these cases:—

R. Argent. nitratis. gr. iv—vj.
Aque destill. ʒj.
ft. lotio.

R. Hydrarg. bichlorid gr. ij.
Liquoris calceis, ʒj.
Misce bene ft. lotio flava.
R. Hydrarg. chlorid, gr. xv.
Liquoris calceis, ʒj.
Misce bene ft. lotio nigra.
R. Cupri sulph. ʒss.
Camphoræ, gr. viij.
Bol. armen. ʒss.
Aque fervent. ʒviij.
Solve et cola, ft. aqua bateana.

EXTRACTS FROM FOREIGN JOURNALS.

[For the Medical Times.]

ITALIAN.

Scirrhus of the breast transformed into an enormous cancer. By M. Jelapi.—A woman, forty-six years of age, had for four years a tumour in the left breast, which had gradually acquired the size of a large apple. It was indolent, moveable, devoid of inflammatory action, possessing all the characters of scirrhus, and appeared in every way favourable for removal; but the patient would not permit the operation. A year afterwards, M. Jelapi was called to her again. The tumour had then acquired the size of a man's head, and presented several cracks on its surface, from whence an acrid, corrosive, and fetid discharge took place. An almost continuous fever was undermining the strength of the patient, who was confined to her bed. In spite of these alarming symptoms, M. Jelapi, on taking into consideration the mobility of the tumour, the absence of tumefaction in the axillary glands, and the perfectly sound state of all the other viscera, decided on its extirpation as the only means of saving the patient. The operation was performed on the 10th of May, 1833, by M. Dominico Melito. The tumour, after its removal, weighed upwards of ten pounds; it was composed exteriorly of a lardaceous tissue with cerebriform matter in the centre. The edges of the wound were drawn together by agglutinative bandages; no bad symptom followed, and in less than two months it was cicatrized. The patient underwent a course of alterative medicines, and soon returned to her occupations. It is now three years and a half since the operation was performed, and not the least return of the disease has taken place.

The importance of this observation consists in the permanence of the cure; for, according to the report, the tumour in this case was essentially cancerous, and at the time of the operation in a state of ulceration. Such cases are exceedingly rare; but the accuracy of detail in the present instance, as well as the respectability of its vouchership, leave no room for doubt as to its authenticity.

On the action of strychnine on the iris and pupil. By M. Civinini.—A man, forty-eight years of age, was admitted into the Hospital of the University of Pisa for a paralytic affection of the right arm consequent on a suppressed discharge of the ear. He was treated with *nuxvomica*, which caused a remarkable contraction of the pupils; but, to judge in a decisive manner of the comparative effect of belladonna and of strychnine, Professor Puccinotti caused friction to be made with belladonna over the right eyebrow, and with an ointment containing strychnine over the left. Two hours after, the pupil on the right side was widely dilated, while that on the left was in a state of extreme contraction.

On the cause of the frequent return of Stammering after division of the genio-glossi muscles, and a new mode of preventing it. By M. Malagodi.—M. Malagodi commences by comparing the cause of this affection with that

of club-foot, wry neck, strabismus, &c., and shows that in stammering as in the other diseases, the section of the retracted muscles is the essential point of treatment. But in all these cases, section alone cannot produce a cure; it is necessary to keep the two ends of the divided muscle separated for a sufficient time by some mechanical means, to prevent a return of the affection.

Acknowledging the correctness of these data, the remedial measure which he proposes appears simple enough. It consists in keeping, for some time after the operation, the divided surfaces of the genio-glossi muscles as widely separated as possible. For this purpose, we may select one among the various instruments which have been invented for the cure of stammering, and which mostly act by keeping the tongue retracted within the mouth. These instruments, in the same manner as those employed for the cure of club-foot, are of but little value when employed alone; but in maintaining the effect produced by the division of the muscles, a new field is opened for their utility. The one to which M. Malagodi usually gives the preference, is the small fork-like instrument, invented by Itard, and which, being about an inch in length, is applied by one of its extremities against the lower jaw, while the *frænum* of the tongue is received within a small bifurcation at the opposite end, and the tongue is thus forced backwards.

On the subcutaneous section of the symphysis pubis. By M. Carbonai.—The mode of operating adopted by M. Carbonai, is as follows:—He makes, about sixteen lines above the pelvis, a small transverse incision through the skin, and then introduces, from above downwards, along the median line, and in the direction of the symphysis, a bistoury with a straight and very narrow blade fixed in the handle. Then carrying the instrument beneath the skin, until its extremity reaches the inferior part of the symphysis, he applies the cutting edge against the ligaments, and divides them by giving slight saw-like movements to the instrument. M. Carbonai has frequently repeated this operation upon the dead body, and never experienced any difficulty. He in no case produced any injury to the surrounding parts, although he had purposely abstained from emptying the bladder or drawing the urethra aside by means of a catheter, as recommended by authors. The advantages which he expects to derive from this mode of proceeding are the following:—1st. No preparation is required, no special apparatus. 2ndly. Its extreme rapidity; a minute suffices for the performance of the operation. 3rdly. It causes scarcely any pain. 4thly. The external wound becomes immediately re-united. 5thly. The divided symphysis also becomes united in a very short space of time. 6thly. Probably this operation would not be followed by a diminution of power in the symphysis. 7thly. It would constantly and effectually prevent purulent infiltration, and all the effects of inflammation. He avows, however, that he has never performed this operation on the living woman.

This proposal, we think, deserves the attention of surgeons, although there are some grave accidents resulting from section of the *symphysis pubis*, which even this modification cannot prevent, such as the rupture of the sacro-iliac ligaments; but at the same time it certainly has the merit of guarding against the results of inflammation of the cellular tissue of the pelvis. Still this operation, under any circumstances, can merely give a slight increase to the diameter of the pelvis, and should consequently be thought of in those cases only, where very little augmentation in its size would seem to be requisite.

MEDICAL MEMS. OF THE WEEK.

BY PRISCOPICUS.

NEW AID TO LABOURS.—Mr. Staniland, of Fareham, observing that when the bladder was distended with urine, or the rectum with feces, the abdominal muscles lent their assistance to expel their contents, thinks that an excitement similar to that of the head of the child, or the unbroken membranes on the vagina in their passage will greatly promote the efforts of nature, and that such an excitement ought to be created: 1. In cases of first labour, where the os uteri is fairly dilated, the head of the child has been in the passage from eighteen to twenty-four hours, the patient much fatigued, and the pains, without assistance, comparatively ineffectual, the womb acting. 2. In cases after the first child, where the passages are rather confined, or the head of the child unyielding, although in the passage, and the natural efforts unavailing, especially when warm fluids and stimulants have been tried without benefit. 3. Where there is much rigidity of the perineum on which the head rests, but the natural efforts either greatly exhausted or the perineum unyielding; the practice here serves two purposes, viz., dilatation and stimulation. Lastly. Where the womb and abdominal muscles, after a severe labour, sink into a collapsed state, and are indisposed to do more work, and the placenta, though in the upper part of the passage, does not excite the abdominal muscles to action. Mr. S.'s plan is to introduce the fore-finger, or fore and second fingers, as far as the point of the os coccygis, and passing them along the whole surface downwards of the vagina, so as to give the sensation of distension, not pain, just enough to excite the required action, and give new and more vigorous impulse, even after hot fluids, stimulants, ergot, &c., have been tried in vain. He thus produces a reflex and wholesome contraction of the abdominal muscles, to say nothing of the independent action of the uterus, and during many years of practice, he has found that in saving of pain to the patient, and of time to the practitioner, this natural stimulus is productive of the happiest results.

MALE HYSTERIA.—Mr. Alfred Smee gives a rather singular case of extremely violent, clearly-defined hysteria, occurring in a Bank porter. The subject was small, weak, and effeminate, of an excitable and susceptible mind, and easily startled, and was said to be a somnambulist. Mr. Smee applied extreme cold to the top of the head, which was burning hot in a very cold day, and great warmth to the feet, which were as remarkably cold. He makes a very proper observation on the danger of bleeding in such cases, remarking, that the danger of a relapse is proportionate to the degree of weakness that supervenes after the first paroxysm.

TRACHEOTOMY.—Mr. Alford, of the Taunton Hospital, presents us with an interesting case where this operation was performed in circumstances of great difficulty on a patient who was on the verge of asphyxia. The result was successful. Eight months after the operation, Mr. Alford saw the man again, and found that he had worn the tube constantly, and though he could breathe by the glottis a little, he was yet unable to do so without distress for more than a minute or two at a time. He had suffered no inconvenience or irritation from the presence of the tube, except for the first few days.

HAIR-LIP.—Dr. Dawson, of Dungannon, gives a case of hair-lip, where he operated successfully on a child four years old. The result has inspired him with such confidence in the reparative powers of the flesh of infants, that he announces a resolution to operate in all

future cases as soon as the circulation is completely established.

MEDICAL NEWS.

WESTMINSTER HOSPITAL.—On Wednesday, the 23d inst., the Westminster Hospital Medical Society held their last Sessional Meeting, Dr. Basham in the chair, when the Essay Prize was awarded to W. T. Kay, Esq., for an original Thesis on the Anatomy and Physiology of the Liver.—A Testimonial was presented to Mr. Williamson, Vice-President, on his retiring from office, by the Society; and an Oration delivered by Mr. Williamson, on the past and future prospects of the Society, in the presence of a number of influential governors and lecturers of the hospital. The business of the evening was concluded by the announcement of an Annual Prize of the value of five guineas, from Anthony White, Senior Surgeon to the Hospital, and Vice-President of Royal College of Surgeons; and another of equal value by the Lecturers of the School. This Society is open to Members of all the Medical Schools of London.

RAILROADS.—We have recently seen a very ingenious model of a steam-carriage by Mr. Coles, and for which he has obtained a patent. The improvement mainly consists in increased facility of turning curves, and the great saving of power, by the ingenious diminution of points of contact, id est, friction. The whole contrivance is extremely ingenious; and considering its perfect action as a model, we were astonished to hear that no company had yet tried it on a larger scale.

BRITISH MEDICAL ASSOCIATION.—This body held its half-yearly meeting, on Tuesday evening, in Mr. Power's room at Exeter Hall, Dr. Webster presided. The meeting was not numerous, but was highly respectable. After the object of the meeting had been explained by the chairman, who announced that Sir James Graham had announced to him the postponement of the medical bill till the next session, the breviat of a "New Medical Profession Bill," enacting, among other matters, the incorporation of the whole profession into one faculty, while preserving the existing licensing institutions, was submitted to the meeting.—Dr. Marshall Hall moved a resolution declaring that nothing but the bill of the Association, or one based on similar principles, would find acceptance with the meeting. He enlarged on the absurdity of treating the large body of general practitioners in the way proposed by Sir James Graham, condemned the practice of charging for professional skill in the shape of remuneration for drugs, and finished an effective speech by declaring that no principle which did not ensure the great body of medical men some control over their governing bodies could lead to a satisfactory result. Professor Grant, Dr. Granville, Mr. Dermott, and other gentlemen, addressed the meeting, and resolutions severally referring to the new poor-law regulations, the lunacy bill, and income tax, were unanimously carried.

OBITUARY.—Ewen Mac Lanren Smith, M.D. in George Town, Demerara.—At his residence in York Street, Portman Square, Sir William Beatty, M.D., F.R.S., late Physician to her Majesty's Fleet, and to Greenwich Hospital. He attended Nelson at his last moments, and those who knew him well, and intimately like ourselves, can alone appreciate the sterling worth of his character.—Matthew Chalmers, Esq., M.D., on Sunday evening, the 13th instant, at his residence in George Street, Hull. He was the senior Physician to the Hull General Infirmary, and to the Hull and Sculcoat's Dispensary, and was one of the alderman of that borough, and last year served the office of mayor.

ADVERTISEMENT.

MEDICAL RECORD.—(No. 4.) April. Just Published, Sir James Graham's Bill of Medical Reform—Alarming Critical State of the Medical Profession—Astonishing Apathy of its Members—Taciturnity of the Medical Journals—Treachery of Parties—Character and Conduct of the British Medical Association—the Scandalous Anatomy Act—Conduct of Ministers—Alderman Copeland and the Anatomy Act—All the Medical Information of the Month gleaned from all other Journals, British and Foreign.

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JOSEPH CLARK, Surgeon.

Par-street, Camden Town, June 2, 1838.

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A Journal of English and Foreign Medicine and Medical Affairs.

No. 133. VOL. VI.

LONDON, SATURDAY, APRIL 9, 1842.

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COURSE OF CLINICAL LECTURES ON PNEUMONIA.

Delivered in the Hospital of La Charité, by Professor CHOMEL.

LECTURE XI.

VII. Digestive Tube.—In the majority of pneumonic patients, the tongue either presents its natural appearance, or else it has a whitish or yellowish tint. Thus it presented these conditions in sixteen out of thirty-five subjects who died of this disease, and in forty-nine out of fifty-six who were cured. In the others, it offered different characters, such as dryness, a more or less vivid redness, dry or moist fur, &c. (M. Louis.) The brown fur of this organ usually announces an adynamic state in the adult; but it is otherwise with the old man; in him, this state of the tongue is frequently combined with a pneumonia otherwise perfectly regular in its progress. The *thirst* is usually but slight; *loss of appetite* is almost invariable, and remains till convalescence. *Epigastric pains, nausea, and vomiting* frequently arise in the course of pneumonia. Thus in twenty-four fatal cases of this disease, in which M. Louis was able to gather the exact particulars, seventeen had gastric symptoms, pains, nausea, or vomiting; and the mucous membrane of the stomach was more or less altered in twelve. The importance which these phenomena acquire in the treatment of pneumonia, especially where we think of administering tartarized antimony, has induced me to lay before you the following details, as noted by M. Louis.

Eleven of the seventeen patients mentioned above, or rather more than the half, had pains at the *epigastrium* in the intervals of the cough; four had these pains from the first or the second day, the others from the fifth to the twelfth. They were of very short duration in three cases, and lasted from five to twelve days in the others.—The mucous membrane of the stomach was diseased to a greater or less extent in seven of the individuals thus affected. There was, besides the cough, *nausea* in a third part of the cases, that is, in eight; occurring at the commencement of the disease in three, and at a more or less advanced period in the others; it was of momentary duration in the four, and continued for a variable period of from four to ten days in a similar number. Eight subjects had *vomitings*, and six of these *vomitings of bile*. This symptom, which was but momentary in two cases, occurred in the others more or less frequently during a space of from two to five days; it commenced with the affection in half the patients; and in those who had vomitings of bile, the mucous membrane of the stomach had undergone a greater or less alteration. It was most diseased in three subjects who had pains and bilious vomitings at the same time; being rendered soft and thin in two, while it was softened only in the third case, but to a very remarkable degree and throughout the whole extent of the stomach. In these cases, as in the course of typhoid affections, adds M. Louis, bilious vomiting appears to be the most certain symptom of acute affections of

the stomach, as nausea is the most uncertain; inso-much that the mucous membrane of the stomach was sound in almost all the individuals who had experienced nausea only besides the cough. From a series of observations made upon the gastric symptoms, and corresponding lesions of the stomach, in peritonitis, variola, erysipelas, *ramollissement* of the brain, acute hydrocephalus, and especially typhoid fever, M. Louis concludes that the affections of the mucous membrane of the stomach which arise in the course of acute diseases of all kinds are often latent; that epigastric pains, combined with bilious vomitings, when of a certain duration indicate some grave lesion of the mucous membrane of the stomach; that lesions of this membrane generally begin at an advanced period of the affection; that epigastric pains do not always indicate any appreciable lesion of the stomach; and that their nature and seat are often difficult of appreciation. Of fifty-eight peripneumonic patients *who were cured*, twenty-three experienced some gastric symptoms in the absence of cough; fifteen were affected with pains in the epigastrium, and ten with vomitings. The pains, which were either spontaneous or provoked by pressure, commenced on the first day of the disease in one case, and between the fourth and eighteenth day in the others; transient in seven patients, they continued for a period of from two to eight days in half of the affected subjects. The vomitings were bilious in eight individuals; they took place the first day of the affection in one case, and from the second to the thirtieth in the others; were momentary in four patients, and lasted from two to seven days in six. Pains were combined with the bilious vomitings in five of these subjects; that is to say, these five had an affection, either slight or severe, of the mucous membrane of the stomach; thus making the number of those affected with pains in the epigastrium as compared with those who had pains and bilious vomitings at the same time, in the proportion of three to one. After having studied these different symptoms in many other acute affections, M. Louis ascertained that the mucous membrane of the stomach, as also that of the intestine, is affected in a variable proportion, and at different stages, in the course of all acute febrile diseases, attended with more or less inflammatory action. Morbid anatomy clearly demonstrates this fact in the dead subject, and the comparison of the symptoms experienced by those who have been cured with similar symptoms exhibited in those who have died gives almost as great certainty in the one case as in the other; and not only does comparison demonstrate this circumstance in a general manner, but it also indicates, with sufficient precision, the proportion in which it takes place. It results, then, from these facts, that disease of the mucous membrane of the stomach and bowels is not only less frequent, but also less severe in those cases which terminate favourably than in those which are fatal, and that its degree and its frequency are proportioned, whatever the issue of the disease, to the violence of the febrile movement.

With respect to the *intestinal tube*, we observe, in the majority of pneumonic patients, a *constipation* which yields with a greater or less degree of difficulty to the employment of lavements; still we not unfrequently meet with *diarrhoea*, as happened in a fourth of the patients who came under my care in 1836. These patients laboured under a slight relaxation, with or without colic, which arose most frequently at the commencement, or at least during the first days of the disease. This looseness was accompanied in one patient by tension of the abdomen, with pain on pressure. But, as M. Grisolle observes, looseness alone, without pain or tension, would be no indication of intestinal inflammation; for in three individuals thus affected who died, we found the mucous membrane of the

intestines thin and remarkably pale, without any appreciable change in its consistence or in its thickness. This fact is of great importance in the treatment of pneumonia; for the existence of relaxation of the bowels will be no contra-indication to the employment of full doses of tartar emetic, it will merely be advisable to combine with it a certain quantity of opium. If, on the other hand, we analyse the cases collected by M. Louis, we shall see that diarrhoea existed in 23 out of 35 peripneumonic patients *who died*; it was proportionately less frequent in those who died before the eleventh day of the disease, than in those who died after this period; it showed itself at a variable period from the commencement of the principal affection, from two to twelve days before the fatal termination; it was ordinarily continued, but sometimes transient, and generally proportioned to the disease of the intestinal mucous membrane. Now, on a careful examination, we shall discover that this symptom occurs less frequently in most other acute diseases, typhoid fever excepted; a fact which agrees with the results furnished by morbid anatomy, for lesions of the mucous membrane of the intestines are both more frequent and more grave in peripneumonia, than in most other inflammatory affections. Of 58 peripneumonic patients *who survived*, twenty-one, or about the third part, had diarrhoea. It was generally of a slight character, from five to six days in duration, sometimes more, sometimes less; it commenced, in the majority of cases, from the fifth to the eighth day of the disease, rarely sooner or later. It existed the first day of the affection in three persons who had drunk freely of wine the same day. By an attentive examination of those individuals who have survived an attack of peripneumonia, compared with those who have recovered from other acute diseases, such as eruptive fevers—namely, variola, scarlatina, rubeola, erysipelas of the face, cynanche, acute rheumatism, bronchitis, &c., we shall soon discover that diarrhoea is a secondary symptom of much less frequent occurrence in these latter diseases than in peripneumonia.

Pains in the abdomen existed, according to M. Louis, in a fourth part of the *fatal* cases of pneumonia; they were transient in four cases, remained from two to twelve days in the others, and commenced from three to eleven after the principal affection; they were acute in an individual who laboured under a double complication of gastritis and enteritis, and were accompanied, preceded, or followed by diarrhoea in all cases. From the abdominal pains existing only in those pneumonic patients who were attacked with diarrhoea, we should be inclined to conclude that this symptom would indicate the existence of some lesion of the mucous membrane of the intestine, with almost as much certainty as the purging; and as in some cases these pains preceded the diarrhoea, it is evident that the affection of the intestinal mucous membrane frequently commences at but a short period from the invasion of the principal disease; this remark is important, as showing how rapid in some cases is the influence of acute febrile affections upon the intestinal canal. Of the 58 peripneumonic patients *who were cured*, fourteen were affected with abdominal pains; that is to say, a rather greater proportion than of those *who sunk* under the disease; but these pains were very slight in favourable cases, and lasted only from 24 to 48 hours. They commenced from the seventh to the eighth day of the affection in almost every instance, and rarely afterwards; twice between the first and fourth day, and with scarcely one exception, they existed only in subjects attacked with diarrhoea. A *tympanitic state* of the abdomen, but little marked, and lasting for three or four days only, existed in four peripneumonic patients out of the 56 who were cured.

VIII. Urine.—According to M. Bonillaud, who

has particularly studied the modifications undergone by this liquid in most diseases, in the first stage of pneumonia the urine is small in quantity, of a deeper colour than natural, and devoid of odour; it reddens litmus paper more deeply than in a state of health; and M. Bouillaud states that he has never, in the course of this disease, found the urine alkaline at the moment of its emission, although he has sometimes discovered this to be the case in typhoid fever; this liquid is also free from deposition. Towards the end of the second stage, and in the course of the third, the urine becomes thick, is more rapidly decomposed than in the first stage, and gives an abundant precipitation. The precipitate is composed of yellowish or grey-coloured flakes, or else of a whitish, thick, and liquid matter, greatly resembling pus. During convalescence, the urine regains its clearness, scarcely reddening litmus paper, or being altogether neutral, but it afterwards recovers its natural acidity.

IX. The face is most commonly red, and the features sharp in the first and second stages of acute pneumonia; in the third, the countenance very frequently assumes a pale yellow tint, more or less resembling that which is observed in cancerous affections. This change in the complexion forms a diagnostic sign of some value in the third stage of the disease. The face becomes livid when the dyspnoea is intense. Some authors affirm that, according as the redness is seated on one or the other side of the face, we may announce that the pneumonia affects the corresponding lung, and that if both cheeks are coloured, the pneumonia is double. But colouration of the cheek can hardly be said to be more proper to pneumonia than to other acute diseases; it is transient, and affects sometimes both cheeks, particularly during the paroxysms, and sometimes one only when the patient has lain some time upon the corresponding side. M. Bouillaud has, however, observed that, *ceteris paribus*, the redness is more marked in inflammation of the summit, than in that of the lower lobes of the lung; and he also states that he has noticed redness of the cheek corresponding to the diseased side in individuals who were accustomed to lie on the back.

x. *Epistaxis* was observed in eight of the fifty-seven patients who were cured (Louis); in one it occurred on the first day of the affection, in three on the second, and in the others from the fourth to the eleventh day. Taking place but once in three subjects, it was repeated for three, four, six, and eight days consecutively in the others, and was sometimes very abundant. M. Louis, however, considers it merely as a secondary symptom, and not at all as a critical one. The eyes were more or less red and painful in two cases of peripneumonia (which terminated favourably) from the third to the sixth day of the disease. In one favourable case, there was a ringing in the ears from the first to the third day.

xi. *Cerebral Symptoms*.—A headache variable in its position, as well as its intensity and duration, frequently accompanies pneumonia; it existed in rather more than half of the peripneumonic patients who died, and in forty-nine out of fifty-seven who were cured (M. Louis). This symptom is augmented by the efforts of the cough, and during the febrile exacerbations. Want of sleep most commonly accompanies simple pneumonia; it is generally in direct relation with the intensity of the febrile movement, the cough, the dyspnoea, and the pain in the side. Drowsiness is observed more frequently in those patients in whom pneumonia proves fatal than in those in whom it terminates favourably; it took place in one only of the latter cases (M. Louis). Sleeplessness sometimes gives place to coma; this symptom is almost always indicative of intense congestion of the brain, and arises especially in those cases where respiration is performed with great difficulty.

Delirium frequently occurs in pneumonia; I shall here merely speak of its degree of frequency, its principal characters, and its connection with the state of the brain and its membranes, as I propose to return to this symptom, when speaking of the prognosis and treatment of the disease. Of twenty-five cases of pneumonia observed by M. Andral, delirium was present in six, or rather more than a

fifth part. It appeared from the fifth to the eleventh day, that is to say, at the most grave period of the disease. In 125 cases treated in this hospital (in 1838-39), delirium existed only five times. In eighty-six patients seen by M. Louis, delirium took place eighteen times. We see, then, with reference to the frequency of this symptom in pneumonia, that, in a total of 240 patients, it existed twenty-nine times, that is to say, in about an eighth part of the cases.

The time of its appearance, its duration, and its peculiar characters, present numerous varieties, as may be seen by the following summary of M. Louis. Ten cases of pneumonia of the fifty-six who were cured, were affected with delirium; three during twenty-four hours only, the others for a space of time varying from two to six days, sometimes with an interval of two or three days intervening. It was continuous or almost so in some cases for five or six days. It existed from the commencement of the affection in one subject, and from the second day in two others; in the rest it began between the fifth and the fifteenth day. The agitation was so great in three cases, that it was necessary to resort to the strait-waistcoat. Now, in the greater number of these cases there was neither diarrhoea nor any gastric symptom. Of the 30 patients who died, eight, or about the fourth part, were more or less delirious for a variable space of time. In one subject in whom the affection lasted seven days, the delirium commenced with the disease, continued without interruption till death, was of a tranquil nature during the first five days, but afterwards became so noisy and furious that it was necessary to confine the patient with the strait-waistcoat. In five patients who died between the eleventh and the twenty-fifth day, it began from four to seven days before the fatal termination, and ended only with life. In a seventh patient the delirium took place on the fourth day of the affection, and from the twenty-seventh to the thirtieth in the eighth individual, who sunk at the end of two months.

Does the seat of the pneumonia exercise any influence upon the frequency and intensity of the delirium? According to several authors, M. Bouillaud in particular, delirium occurs more frequently in inflammation of the summit than in that of the base of the lung, which circumstance he attributes to the position of the large vessels which carry the blood backwards and forwards to the brain. M. Tanquerel des Planches asserts to having seen a great number of pneumonias of the summit of the lung, accompanied by sympathetic delirium, whilst he has seen but one case attended by this complication in pneumonia of the base; this occurred in a child, and the delirium lasted only 24 hours. In double pneumonia, or in that occupying the whole of one lung, delirium is in like manner more frequent than where the pneumonia is of less extent. A point of some importance to ascertain is, whether the delirium which we observe in the course of pneumonia, is constantly combined with some appreciable lesion of the brain, such as congestion of its vessels, effusion of serum at its base, the formation of false membranes, ramollissement, &c. Now, according to M. Esquirol whose opinion is of great weight in such matters, the delirium is in nineteen cases out of twenty independent of any idiopathic affection of the brain; and according to M. Louis, it seems impossible in the present state of science to discover the cause of the delirium in any appreciable alteration of the brain. For in five of the eight subjects (above mentioned) who laboured under delirium, the brain was perfectly sound; it was more or less injected in the others, and the cortical substance was of a rose colour in one case only; whilst this colouration existed in six individuals who had experienced no delirium, or had laboured under it during the last twenty-four or thirty-six hours of existence only. The brain again was in a perfectly natural state in two subjects in whom the delirium continued uninterruptedly for seven days. Can this delirium be attributed to the sympathetic influence exercised upon the brain by the diseased state of the stomach or intestine? But in three cases in which delirium was present the mucous membrane of these parts was perfectly sound. This symptom must then be attributed to the inflammation of the lungs. But we have still

to ascertain whether it should be considered as the effect of sympathy, or as the result of the febrile movement originating in the pneumonia. M. Louis regards this last supposition as the only probable one, seeing that the delirium was proportioned to the fever in the cases which he has cited, and that by admitting the delirium to be sympathetic, it would be also necessary to admit this sympathetic action to be of the same degree in organs most different in their structure and functions; a fact which appears impossible. "Still," says M. Louis, "I shall be but badly understood in reference to this subject, if it be imagined that I admit no other influence but that of fever in the production of delirium, since the effects of this phenomenon are not always the same in individuals carried off by a typhoid affection as in those who have sunk under an attack of pneumonia. What I wish to say, and what appears to me evident, is, that the sympathetic influence of the organs various is but of secondary importance compared to that of the fever."

Delirium is not observed so frequently in adult men as in women and children, in whom the disturbance of the nervous system sometimes simulates *meningitis*, and at other times an irregular form of typhoid fever. In some adult men even, we see the least inflammatory affection, as *angina*, or slight erysipelas of the face, give rise to delirium, which is evidently sympathetic and comparatively unimportant. With respect to the old man, we shall see, when speaking of the general symptoms which accompany pneumonia at this age, that it is important to establish a distinction between the disturbance of the intellectual powers, the stupified and peculiar expression of countenance observed in these patients, and the symptoms presented in true adynamic fever. In the one case, in fact, the muscular powers may be preserved and there may be perfect febrile re-action, two phenomena which we do not observe in the true adynamic state.

xii. *Muscular Power*.—Most persons, when attacked with pneumonia, are from the commencement of the disease obliged to keep their bed. Some, however, preserve sufficient strength for two or three days to follow their ordinary occupations, and then frequently walk to the hospital for admission. In the cases collected by M. Louis, the debility was generally proportioned to the extent of the affection in those who died, but none of them experienced that extreme prostration which is so remarkable in typhoid fever. The weakness was much increased in those cases where diarrhoea supervened; it was very considerable in two subjects, in whom the gastro-intestinal mucous membrane was greatly diseased. Of the fifty-seven patients who recovered, four laboured under a remarkable state of debility. The affection was perfectly simple in one of these cases, while in the others it was complicated with gastric symptoms or with diarrhoea.

Subsultus tendinum is extremely rare in all acute diseases, typhoid fever and *colica pictonum* excepted; M. Louis observed it in but one case of pneumonia which terminated favourably. The extreme rarity of this symptom may, in certain cases, tend to clear the diagnosis of pneumonia.

WOUNDS.

By W. T. KAY, Esq., M.E.S.I., &c.

(Continued from page 291.)

OF CASES IN WHICH AMPUTATION SHOULD BE DONE IMMEDIATELY.

1st. A limb carried away by a cannon-ball, or the explosion of a howitzer, or bomb, requires amputation without loss of time; the least delay puts the patient's life in danger. In this case the necessity of the practice is inculeated by Larrey, Dr. Thomson, Hutchison, &c.

When a cannon-ball has torn off a limb, amputation of the stump should be performed, in order to procure the patient an even, smooth incision, instead of an irregular, jagged, and highly dangerous wound; as the limb has commonly suffered a violent concussion, is almost bereft of sense and power of motion, and the bone frequently has a fissure extending some way upwards. Amputation is sometimes recommended to be done, if possible, above the nearest joint. Were the operation not

done, this kind of injury would require large and free incisions for the extraction of foreign bodies, the shortening of projecting muscles and tendons, and the discharge of abscesses; and as these incisions are likely to occasion at least as much irritation as amputation itself, without being productive of equal good, the avoidance even of pain cannot be urged as a reason against the practice. The occasional healing of such wounds only proves that it is not altogether impossible, in certain cases, to effect a cure without amputation. The surgeon can the more readily make up his mind to amputate, as, in this case, the operation does not occasion the loss of a limb. As for the place of the incision, no one would be justified in amputating above the knee, when the limb is injured at the foot or ankle. The skin has been violently stretched and lacerated; the muscles have been ruptured and irregularly torn away; the tendons and aponeuroses lacerated; the nerves and vessels divided and forcibly dragged; lastly, the bones broken and smashed to a greater or lesser extent. These first effects are followed by a general or partial commotion, by a kind of torpor in the injured part, and a good way above the wound, by a painful trembling in the remains of the limb, an event that is singularly afflicting to the patient, and by a local swelling preceding the erythema, which quickly shows itself. The hæmorrhage, says Larrey, an accident much more to be apprehended than has been supposed, often comes on a few moments after the injury, and if prompt succour were not afforded, would terminate fatally. If the operation is not speedily done, pain commences, fever occurs, and the functions of the system become disordered, the irritation then increases, and convulsive motions take place. If the patient should not be a victim to these first symptoms, gangrene of the stump follows, the fatal consequences of which it is extremely difficult to prevent.

When a body, propelled by gunpowder, strikes the limb in such a manner as to smash the bones, violently contuse, lacerate, and deeply tear away the soft parts, amputation ought to be performed immediately. If this be neglected, all the injured parts will soon be seized with gangrene; and, besides, as Larrey has explained, the accidents, which the gravity of the former case produces, will also here be excited. If a similar body were to carry away a great mass of the soft parts, and the principal vessels of a limb, (of the thigh, for instance,) without fracturing the bone, the patient would be in a state demanding immediate amputation, for, independently of the accidents which would originate from a considerable loss of substance, the limb must inevitably mortify. Mr. Guthrie* also says, "A cannon-shot destroying the artery and vein on the inside of the thigh, without injuring the bone, requires amputation." When, however, the femoral artery, or vein, is injured by a musket-shot, or small canister-shot, this gentleman recommends tying the vessel above and below the wound in it, if the nature of the case be evinced by hæmorrhage. But, he believes, that when both vein and artery are injured, amputation is necessary.† A grape-shot strikes the thick part of a member, breaks the bone, divides and tears the muscles, and destroys the large nerves, without, however, touching the main artery. According to Larrey and Guthrie, amputation is again requisite. If a spent cannon-shot, or one that has been reflected, should strike a member obliquely, without producing a solution of continuity in the skin, as often happens, the parts which resist its action—such as the bones, muscles, tendons, fasciæ, and vessels—may be ruptured and crushed. The extent of the internal disorder is to be examined; and if the bones should feel, through the soft parts, as if they were smashed, and if there should be reason to suspect from the swelling, and a sort of fluctuation, that the vessels are lacerated, amputation ought to be immediately practised. It is to such injury, done to internal organs, that we must ascribe the death of many individuals, which was for a long while attributed to the commotion produced in the air. According to Baron Larrey, when the articular heads of bones are much broken, especially those which form the joints of the foot, or knee, and the

ligaments, which strengthen these articulations, are lacerated by the fire of a howitzer or a grape-shot, or other kind of balls, immediate amputation is indispensable. The same indication would occur were the ball lodged in the thickness of the articular head of a bone, or were it so engaged in the joint as not to admit of being extracted by simple and ordinary means.

(To be continued.)

PHYSIOLOGY OF ANIMAL SUSTENANCE.

(Continued from p. 221.)

THE case of Ann Moore, of Tutbury, in Staffordshire, requires perhaps a fuller notice than those which have preceded, as for a very long time public attention was kept alive respecting her powers of abstinence by repeated pamphlets, and the reports of those who had visited her. Our information is drawn from three different pamphlets referred to below.*

Ann Moore was the daughter of a man of the name of Pegg, who lived at Rostleton, in Derbyshire, where she was born in 1761. At 27, she married one Moore, a labourer, from whom she was soon separated, very probably in consequence of her dissipated life, and went to live as servant with a farmer in the neighbourhood of Sudbury, by whom she had two children, a boy and a girl. She appears to have been good-looking, was above the common size, and for a person in her circumstances, well informed. About the year 1806, she was engaged as nurse to a man suffering from scrofulous ulcers, the effluvia from which were so offensive that no person but Moore could approach him. This patient died in 1806, and her loss of appetite she attributed to her attendance on him. She had, however, suffered much from ill-health for the ten years previous, and affirmed that in all that time she was never exempt one hour from pain. On the 4th of November, she ceased to have anything to do with the washing of the linen of the said scrofulous patient, by which time she had entirely lost all desire for food, as well as ability to take it. Her solid food, therefore, from November until March, did not exceed half an ounce a day, and her drink was usually tea, but without milk or cream. Whatever she took brought to her imagination the disgusting smell of the scrofulous ulcers, which generally terminated in vomiting, when a slimy fætid matter, resembling the ichor of ulcers, was thrown up. In March, 1807, hysteria supervened, followed by cramp in the stomach, for the cure of which she drank *boiling hot* gruel, which, though scalding her lips and mouth, produced no ill effects. Anything less hot brought on a sense of coldness, and diffused a chilliness over her body. A washed potatoe was the last solid food for which she retained a relish.

In April (14th), 1807, she first took to her bed. A few days prior she had eaten half a potatoe; fourteen days after she sucked an orange, and ate a queen cake and a half. From this time until the 20th of May, she took nothing but tea without cream; and very soon afterwards finding the sugar did not agree with her, she omitted that also, and drank simply a weak infusion of tea. She was much troubled with flatulency and distension of the stomach. On the 20th of May, she swallowed a small piece of biscuit, but she immediately vomited it in great pain, accompanied with blood. Her misery it seems was now very great, for independent of her dreadful situation, she had not even sufficient clothes to cover her, and during the winter (1807) no fire was lighted in the room, while the snow and rain beat through the tiles. The last solid food she ate

* 'The Life and Extraordinary Case of Abstinence of Ann Moore, of Tutbury, &c. By R. Taylor and J. Allen, Surgeons. 8vo. London, without date.'

† 'An Account of the Extraordinary Abstinence of Ann Moore, of Tutbury, &c. By a Gentleman living near Tutbury.' 8vo. Uttoxeter, 1810.

† 'A faithful Relation of the Wonderful and Extraordinary Abstinence of Ann Moore, &c. 8vo. Birmingham, no date.'

See also the Medical Journal for Nov. 1808, p. 24.

was in June, 1807, and this was a few black currants. "On the 3rd or 4th of August, she had a stool in the way of diarrhœa, and that was the last intestinal evacuation she ever had." (This account was published in 1810.) "From this time she gradually diminished in her quantity of liquids, sometimes omitting to take any for two or three days together." Her evacuations, however, we are told, by urine, were at this time the same as those of a person in health, which seems surprising. She had once changed her tea to onion tea, thinking it would agree better with her, but she soon discontinued it, and returned to tea again. Her strength declined, though her spirits continued good; she was extremely susceptible of cold,* and perspiration was frequently obstructed from the slightest causes. Her head and left side were never free from pain, and abscesses repeatedly broke out on the head. Her situation having attracted the attention of the Rev. Mr. Hutchinson, he engaged Mr. Taylor, a respectable surgeon from Lane End, to inquire into the allegations of her fasting. Accordingly Mr. Taylor visited her on the 12th of September, 1808, and found her pulse seventy-four. She was also extremely emaciated, and, on being asked, expressed herself willing to undergo any test. She was accordingly removed to the house of a Mr. Jackson, who having great doubts of the reality of her abstinence, undertook to procure proper persons to watch her, who were relieved every four hours. Her removal took place on the 13th of September, at 3 o'clock in the afternoon. At this time her pulse was weak, sixty-eight in a minute, and her spirits depressed. The day after, she had an attack of fever, probably occasioned by moving and exposure to air. During the three first days of her trial, she swallowed about an ounce and a half of water, but Mr. Taylor observing the pain it gave her, and the violent rising of the wind resisting its passage, dissuaded her from taking any more. She followed his advice, and found every good effect expected from swallowing the water obtained by wiping her mouth with a wet rag, since which period she never ventured to swallow any liquid whatever,† (An. Dom. 1810.) At the time of the examination or trial, she usually voided about a pint of urine in two days, which was of a strong offensive smell. But by the end of the watch, it took place only once in two or three days, or more, and in less quantities and with considerable pain. On the whole, however, she continued in better health than previous to her removal, "and except now and then, has made water and perspired freely as persons in health do." On Thursday afternoon, the first week of the watch, she was visited by Mr. Birch, a surgeon, who made a very minute inspection of her body. He found her exceedingly emaciated, yet her face was not remarkably thin. There was no appearance of intestines in the abdomen; all the parts appeared to be drawn up and lost under the breast and ribs. The spine, without causing her much pain, could be felt by pressing the hand upon the abdomen. The aorta could be pressed towards the spine, "and by holding the integuments across it with the finger and thumb, its pulsation and circumference might be easily perceived." She measured round the hips 30 inches, round the loins 26½ inches, and over the breast 28½ inches. The watch continued until 27th September, being the six-

* Hunter observed, (Animal Economy, pp. 144-5) that if an animal be enfeebled by abstinence, its power of maintaining its temperature is also lessened. It occurred to the writer of this article to witness the same fact; some white mice had been neglected, and past upwards of forty-eight hours without food; they had become torpid and cold; by being held in a warm hand they were perfectly restored to life and activity before a morsel of food had been administered. (Dr. Marshall Hall, in the *Encyclop. of Pract. Med.*, art. *Abstinence*. See also *Bligh's Voyage to Otaheite* for some curious information on fasting.)

† A writer in the *Encyclop. Metrop.* says, proofs abound as to the possibility of maintaining life for a considerable time, and under the most unfavourable circumstances, on small quantities of water or other liquids.

* Guthrie on Gunshot Wounds of the Extremities, p. 185.

† Ditto, p. 186.

teenth day from the time when she had first been attended day and night. "It was now (says the narrative published at Uttoxeter in 1810) the fourteenth month of her total abstinence from food, and the thirteenth day of being without even water, and she said that she felt herself stronger and better than she had been for more than a week back, and remained as chatty and cheerful as ever." (p. 20.)

From this period she continued much the same, with the exception of a gradual diminution of strength. In March, 1809, the writer of the Uttoxeter pamphlet visited her, and found her in spirits; she was unable however to move her legs, and the extremities from the hips appeared dead. The quantity of urine had considerably diminished, while the length of time between the periods of micturition had gradually increased, and it was now sixteen days since she had had renal evacuation. She had "continued gatherings in her head," to which cause she attributed the constant headaches which afflicted her. The formation of the abscess was always preceded by shivering fits. She had now discontinued the use of the wet rag, never feeling occasion for it, as her mouth was sufficiently moist, but not so much so as to enable her to swallow. She could not endure people who had taken the smallest quantity of malt or spirituous liquors, the fumes of their breath caused giddiness in her head like that experienced by a person in liquor, attended with vomiting and illness; yet she liked the smoke of tobacco, and took a fair proportion of snuff. "She has not," says the same writer, "taken the least particle of solid food since June, 1807, nor any kind of liquids since October, 1808." (p. 21.) In endeavouring to account for this woman's abstinence, he continues, "Chemists have ascertained that hydrogen is the basis of animal fat, (or rather oil, while the body is living, as its caloric or heat preserves it in a state of fluidity); therefore when we consider the quantity of hydrogen that abounds in the atmosphere,* as well as the large portion contained in water, is it not probable that the woman, by some process of the animal economy, produced by means of hydrogen, collects from the decomposition of both a sufficient quantity of animal oil to preserve the body in existence?" (p. 22.)

The detection of this imposture (we use a word, however, which we hesitate to apply to it) is said to have been in the following manner; and we may add, we owe the information to the oral testimony of a gentleman, not having seen any printed account of it. It was observed by a medical man, whose name our informant did not recollect, that the daughter of Moore kissed her every evening on retiring to bed. At first he paid no attention to the circumstance, but on one occasion he saw he thought some moisture at the corners of her mouth, and on the following evening, while the daughter *oscula libavit matri*, he checked her in the act, when it was discovered that her mouth was filled with rum and milk. A confession was subsequently obtained from both mother and daughter, to the effect that the former had subsisted in that manner for years.

(To be continued.)

ROYAL COLLEGE OF PHYSICIANS.

LECTURES ON MATERIA MEDICA.—NO. IV.

By DR. ROUPELL.

BEFORE quitting the subject of the gentians, Dr. Roupell alluded to the *G. Charayita*, of which the herbaceous part is recommended by Annesley, Currie, and others, as an excellent tonic. It has been employed from time immemorial in Bengal, and deserves a place in our list of officinal drugs. A fine sample was upon the table.

Neither the black nor white hellebore is in

general use, although both are retained in the pharmacopœia. They are interesting, however, as well from their history as their properties; the black hellebore belongs to the class of drastic aperients, the benefit of which in cerebral affections was well known to the ancients. They also knew the effect of habit in diminishing the power of medicines. "*Apan-ton de pharmakodon ai dynamis asthenesterai tois sunceithismenois*," are the words of Theophrastus. He tells us that whole handfuls may be taken by those habituated to it; that a mere clown out of the crowd would sometimes put the vender of simples to the blush, by taking more before the people than the *pharmakopones* himself. One Endemus, he adds, was an adept at this practice; he took on the same day two-and-twenty doses, after this he went into the bath, got his supper as usual, and exhibited no sign of discomfort. It would appear that those who in former times recommended this remedy could decide by the aspect such as required and would be benefited by it. The *H. Hyemalis* was called "*aconitum*," a generic name for poisonous plants, as many passages in Juvenal sufficiently attest.

There are several varieties of white hellebore; these contain an active principle, "*veratria*," already treated of under the head of colchicum.

Jalapine, in the form of a perfectly white pulverulent substance, has passed round. It was said that a single grain of this would produce active catharsis, but neither this principle, nor the resinous extract of jalap, has superseded the employment of the root. The quantity required, and the liability to gripe, are objections to this as an aperient; it is, however, in combination both useful and efficient. The smaller roots are to be preferred to the larger.

Every part of the bay, the *daurus nobilis*, was thought to possess some efficacy. In Dr. Burgess's list we find the root mentioned, and Tiberius Cæsar is said to have worn this as a charm against lightning. The sanctity of the ancient groves is well known. There it was supposed no evil spirit could enter, and there the epileptic patient was held to be secure against an attack of his direful malady. Quotations without end might be made to show the former veneration for the bay, which may perhaps have had some share in retaining it to this period in the catalogue of our remedies.

Several *Nymphaeas* were formerly employed in medicine, and attention was directed to the *N. Nelumbo*, the sacred bean of India, of which superb flower a drawing was exhibited. Botanists need not be reminded that the appellation *nymphaea* is in this instance a misnomer; but it is not intended to enter into any description of this plant, which is valuable, however, from its fruit, and interesting as furnishing the Hindoos with ideas of architectural ornaments, as the lotus did to the Egyptians, and the parsley and *acanthus* to the Greeks.

The *Pareira Brea* derives its name from Juan de Pareya, a slave of the famous painter Velasquez. This was considered as a specific for the stone, gravel, and all diseases of the kidneys and bladder, for which it was occasionally administered in combination with *copaiba*. M. Geoffroi extols it in humoral asthma.

The *Pœony* undoubtedly contains an active principle which it may perhaps be thought worth while to separate, since vegetable analysis has been rendered completely easy. The accurate observation of the effects upon our frames of these powerful agents, will, without question, multiply our means of doing good to mankind.

The celebrated botanist, Matthias de Lobel, physician to the renowned William, Prince of Orange, and the states of Holland, gave his name to the *Lobelia*. The *L. inflata*, of which the leaf and stalk are officinal, is a remedy of de-

cided efficacy in spasmodic asthma. The *L. syphilitica* was employed empirically as an antidote to lues, and has shared the fate of most other specifics for this disease. It would appear that the morbid actions set up by the syphilitic virus may in some cases cease spontaneously; this fact, shown by experiments on a large scale in the islands of the Pacific, and the more probable mistake in the nature of the complaint, may probably in this instance, as it has in others, gained an undeserved reputation for the supposed antidote.

This lecture concluded with a few remarks upon the Pelutery of Spain, an active stimulant, the virtue of which renders it an acrid metrus which is found in certain vesicles in the bark of the root.

EXTRACTS FROM FOREIGN JOURNALS.

[For the Medical Times.]

GERMAN.

Section of the sacro-sciatic ligaments, with a view of facilitating accouchement in a case of narrowness of the inferior strait. By Dr. Frantz.—CASE.—H., 35 years of age, small, of a feeble constitution, and subject to œdema of the lower extremities from her infancy, was put to bed about six years since with a child which had not arrived at its full term; two years after, the œdema had made such progress, that it had attacked the thighs, the genital organs, and the abdomen, where there was distinct fluctuation. Under a diuretic treatment these symptoms disappeared; menstruation continued regular. On examination I discovered an old-standing rupture of the perineum, which extended almost as far as the anus; the labia majora were hard and distended; the pelvis small, but proportioned to her height; the vaginal portion of the uterus was low down, and vertical in direction; the two lips of the *os tinæ* were on a level, but separated one from another, and allowed with facility the finger to penetrate for the distance of half an inch within the uterine cavity; these lips were uneven, and apparently covered with distinct and almost cartilaginous *condylomata*; the inferior segment of the uterus was of a larger size than natural. Two years afterwards H. aborted at the sixth month of pregnancy, but instead of the fœtus dilating the uterine orifice, it dragged the inferior segment of the uterus almost to a level with the valva, and it was necessary to incise the edges of the orifice with a bistoury to overcome the stricture which formed an obstacle to the parturition. On examination, some time after this, it was ascertained that the irregularities of the orifice were not more marked than before the abortion. In September, 1840, H. had reached the termination of a third pregnancy, which had proceeded favourably, excepting the œdema of the lower limbs and the genital organs. On the arrival of the accoucheur the waters had escaped, and the breech of the fœtus presented in the third position, and was already fixed in the brim of the pelvis; the uterine contractions were regular; the vagina moist; the pelvis did not appear deformed; and to judge by examination with the finger, there was merely a narrowness at the inferior strait caused by the œdema of the soft parts. After leaving her some time to the efforts of nature, it became evident that the fœtus was arrested at the inferior strait; the soft parts were hard to the touch like cartilage, and the sacro-sciatic ligaments tense, and projecting like large cords; the coccyx was immovable; in the intervals of the contractions the ligaments did not project, but still it was impossible to pass the fingers between them and the fœtus. From this distended state of the ligaments, the inferior

* No free hydrogen has ever been discovered in the atmosphere. The writer meant, we suppose, the hydrogen of the aqueous vapour of the atmosphere, "the decomposition of both" can only apply to water, hydrogen being a simple body.

strait was reduced to the diameter of two inches and a quarter transversely, and two inches and a half in the antero-posterior direction. The accouchement not advancing, emollients and antispasmodics were tried without effect, as well as the hot-bath, castor oil, &c. We vainly tried to apply the crotchet around the groin of the fœtus to draw it out; it was impossible to introduce the two branches of the forceps, and the only resource left, with a view of saving the mother, says the author, was to perform the dismemberment of the fœtus, or else remove it by the Cæsarean operation. In this state of things, the operator decided on dividing the sacro-sciatic ligaments; for this purpose he took a scalpel, and after emptying the rectum and assuring himself of its position by means of a finger introduced into the vagina, whilst a jet of liquid passed through a syringe enabled him by its sensation to ascertain the precise place occupied by the intestine, he charged the midwife with introducing a finger into the rectum and drawing it to the left, whilst with the cutting instrument glided upon the left index-finger he reached the part where the ligament was most projecting and divided it. As the narrowness was very considerable, he directed the midwife to move the rectum to the right, and he then divided the ligaments of the opposite side also. The hæmorrhage was inconsiderable; he then applied the crotchet upon the groin of the fœtus, and easily drew it outside; it was dead. With the exception of a sharp attack of fever and of diarrhœa, which lasted for a few days, no bad result ensued. On the seventeenth day the soft parts at the inferior strait were resistant to the touch; but there was a small recto-vaginal fistula of the size of a quill, which, after a few weeks, healed so far as merely to allow the passage of a few drops of liquid fecal matter when the patient was labouring under diarrhœa.

This case, though far from satisfactory in its details as to the cause of the œdema, the mode of measurement adopted in ascertaining the dimensions of the pelvis, the results of auscultation, and the other means of ascertaining whether the child was living or dead, as also the size of the fœtus itself, is still of great importance, as showing a new application of tenotomy in cases of *dystocia* caused by the sacro-sciatic ligaments.

AMERICAN.—*Enlargement of the thymus gland in a child two years and eight months old.* By Wm. C. Roberts, M.D., of New York.—November 15, 1840, Jos. Manuel (white) came home well on Thursday from school, eat heartily of fried sausage and potatoes, and was put to bed; two hours afterwards awoke and vomited, and had frequent stools. This increased in the morning, and he was drowsy and unwilling to rise. At five p.m., on Friday, had a "burning fever," and was as red as scarlet; he had slept all day, snoring loudly. At six p.m., I saw him. He breathed quick, and the skin had a red hue as if from scarlatina; his face was much flushed, and he was drowsy and peevish; he vomited in my presence some greenish fluid, having before done so frequently. Percussion elicited a clear sound on both sides of the chest, and the respiratory murmur was audible, mixed with slight sonorous râle. The action of the heart was not remarkable for its force; about midnight he had a sudden chill, which lasted nearly an hour, and the redness faded away. On the morning of Saturday, he lay almost comatose, but was able to offer much resistance to my attempts to examine him; he began to change about two hours before his death, which occurred at noon, (a period of forty hours,) being slightly convulsed just before death.

Post-mortem examination.—The lungs perfectly healthy throughout. The trachea and larger bronchi slightly reddened; the left auricle of the heart hypertrophied, and the whole organ large. The thymus gland, very thick and fleshy, completely covered two-thirds of it, extending down on either side; the apex of its left lobe, which was much larger than the right, extending to within half an inch of its point. It was three inches and a half wide, and at its greatest length four inches, and had apparently no cornua, commencing just at the bifurcation of the trachea. The liver was large, but, with the other abdominal viscera, healthy. The mucous coat of the stomach was pale and soft.

The symptoms in this case seemed due to disease of the brain, which I could not obtain leave to examine. I have only recorded it for the purpose of attracting attention to the condition of the thymus gland, a state as yet but little noticed, yet of frequent occurrence. The child was forward for his age, stout, and had always enjoyed good health. The history of this case differs from that of any I have previously recorded. If the brain were not affected, the enlargement of the thymus, except the slight bronchitis, was the sole lesion; if it were, what share had it in causing, or accelerating the rapidly fatal results?—*Amer. Jour. of the Medical Science.*

FRENCH ACADEMY OF MEDICINE.

Glanders.

M. Fourcault read a memoir on the causes and treatment of the above disease, in which he endeavours to prove that glanders and farcy proceed from the dampness of the stables, and the inaction to which the animals are condemned, circumstances which act principally by opposing the secretory and exhalant functions of the skin. That bad quality and homogeneity of the food also contribute greatly towards their production. These various conditions appear especially to give rise to the development of the lymphatic constitution which predisposes so powerfully to the disease. From these considerations he thinks that one of the best prophylactic measures against the glanders consists in giving the animals full liberty, at least during part of the year, and in lodging them, during the bad season, in larger stables than those commonly used.

M. Dupuy stated that five or six very different diseases were described under the name of glanders. He wished to know to which M. Fourcault referred. To the fibrous transformation of the pituitary membrane? To its catarrhal inflammation? To a pustular eruption? or to a carbuncled condition of this membrane?

M. Hamont thought that what he had stated at the last sitting had not been perfectly understood. He had merely referred to the primary causes of glanders, but without in the least denying the influence of dampness and bad food upon its development. He, however, thought that M. Fourcault attached too much importance to these conditions.

M. Dupuy related a fact in evidence of the influence of bad forage in producing this disease. A regiment of artillery being in garrison at Arras, were obliged to feed their horses with bad chaff. Of 115 horses, 45 were attacked with glanders, and 44 with what the veterinary surgeon termed marasmus. The regiment changed its garrison, the horses were better fed, and the disease disappeared.

M. Virey stated that the chevaliers of the eleventh age, after a long journey, used to give their horses oats and wine.

M. Barthélemy seemed to understand M. Fourcault, as assimilating glanders with a tu-

berculous affection. He did not think this view admissible. If tubercles are sometimes found in the lungs of horses affected with glanders and farcy, it is often impossible to discover the least vestige of them. In fact, it is usually in acute glanders that this absence of tubercles is remarked.

On Lithotripsy and the employment of alkalies in the treatment of calculi.—M. Ségalas read a report upon two cases of stone in the bladder, which occurred under Dr. Pétel, and in which lithotripsy was employed without success.

The first case was that of a man, 69 years of age, who had several times been operated on in Paris. On his return into the country, some alarming symptoms arose, and he died of an attack of *peritonitis*. At the autopsy a calculus of the size of a hen's egg was found in the bladder; in the position occupied by this stone, and in a point corresponding to a very marked roughness of its surface, the coats of the bladder were torn through, and a communication thus established with the peritoneum. The bladder contained fifteen smaller *calculi*, some of them consisting of the broken up portions of the large one.

M. Ségalas was of opinion that lithotripsy, at least in experienced hands, and with a little care, could hardly give rise to rupture of the bladder; might not the perforation in this case be legitimately referred to the roughness of the *calculus*, which, rubbing violently against the inflamed surface of the bladder, during the journey of the patient from Paris to Coulommiers, was doubtless the cause of the injury.

The second case was that of a man, 60 years of age, who had for some time experienced pain and difficulty in passing water. M. Pétel sounded him, and discovered the presence of a hard body in the bladder. He advised the operation, but the patient refused to submit. He then ordered alkaline drinks, which were continued for three months, and eventually cured the patient. But M. Ségalas is inclined to doubt whether a *calculus* ever existed in this case. M. Pétel did not, in fact, find one on a second exploration. The patient also had ceased to suffer while making water, before he even commenced the employment of the alkalies. M. Ségalas does not deny the influence of medicines of this kind in urinary concretions, but still he does not think that this case can be considered a proof of their efficacy.

The report was adopted.

Modification for Amputation of the Thigh.—M. Lesauvage, of Caen, addressed a note to the Academy on the above subject. Amputation of the thigh, whether by the flap or the circular method, is frequently followed by an accident of a very grave nature, which greatly retards the cure, namely, the projection of the extremity of the bone from the surface of the wound, and the consequent destruction of the cicatrix. The femur, although placed in the centre of the limb at the moment of the operation, and after there-union of the lips of the wound, becomes drawn upwards, from the incessant contraction of the psoas and iliacus muscles, and this result, he thinks, must be greatly aided by the reunion of the lips of the wound in a vertical direction, so that the muscles of the stump, yielding gradually to their own weight, soon abandon the extremity of the bone, which eventually presents itself at the upper angle of the cicatrix, and may form a considerable projection, when, in consequence of the abundant suppuration and prolonged irritation which it induces, the muscles have become retracted to a considerable distance. M. L. then states that few means have been tried to remedy this inconvenience, and that he has consequently adopted the following modification, which may be equally applied to the circular or flap amputation. After

the skin and soft parts have been divided, he places the compress obliquely, so that the bone may be denuded more on its upper surface than elsewhere; he then inclines the saw so as to produce a very oblique section of the bone, and thus obtain at its extremity an oval surface which is directed forwards. The principal advantages which he states he derives from this modification are—1st. It furnishes a large surface upon which to repose the middle part of the *triceps-femoris* muscle; 2nd, it does away with the right angle formed at the extremity of the bone by the perpendicular section, and which may become a cause of irritation; 3rd, it effaces the space formed in the vertical section at the end of the bone on bringing the soft parts into contact, and which vacuum, by favouring the accumulation and detention of the fluids, may contribute to the nervous irritation so often observed in these cases; 4th, it permits a more immediate re-union between the soft parts and the surfaces of the bone, and consequently presents more chances of union by the first intention. When the operation is concluded, he places strips of plaster so as to obtain a transverse union of the parts. Two strips he thinks sufficient, placed on each side of the point corresponding to the extremity of the bone, which they fix in its relations with the triceps, and thus contribute to prevent all consecutive displacement. An objection, he says, may perhaps be raised to the shape given to the extremity of the bone, which might afterwards cause some inconvenience, and, from its oblique or cutting form, produce a painful pressure upon the soft parts when the person shall wear an artificial leg. But surgeons must doubtless have remarked, that after the cure, the bone assumes various forms altogether independent of the mode of section. He states that he has seen the femur of a man whose thigh was amputated some years back, and in whom the extremity of the bone had entirely lost the perpendicular form given to it by the operation, and had become converted into a point. The transverse re-union of the wound is, he thinks, undoubtedly exempt, in the greater number of cases, from the inconveniences which have been attributed to it, and the principal of which is the retention of pus within the lips of the wound. This mode of re-union has been already proposed by Hennen, and also by Velpeau. He thinks that a free exit will be allowed to the pus by the manner of applying the dressing which he has recommended.

FRENCH ACADEMY OF SCIENCES.

Dissolution of urinary calculi.—M. Pelouze read a report, in the name of M. Gay-Lussac and his own, upon a work by M. Leroy d'Etiolles, on the above subject. After a review of the various lithontriptic remedies which have been in former times so much lauded, that of Miss Stephens in particular, M. Gay-Lussac states that none of them could bear the test of examination, but that on analysing the cases of pretended cure, their fallacy became apparent. The labours, however, of Fourcroy, Vauquelin, Marcet, &c., opened a path to new researches. From a knowledge of the molecular constitution of calculus concretions, it was attempted to vary the nature of the dissolvent according to the nature of the calculus in each case. We have for some years heard the employment of alkaline waters much extolled from their supposed action in destroying the mucus which serves to hold together the solid particles, and which would thus necessarily cause the dissolution of the stone. But the cases which have been brought forward in support of this view, have perhaps been scarcely conclusive. M. L. then proceeds to state, that he has for nearly two years been endeavouring

to clear up this question, both by chemical experiments and by clinical observation. Chemical analysis shows that the alkaline carbonates dissolve uric acid calculi but very slowly, even where the alkaline solution is greatly concentrated, and at a temperature of 40 deg. In experiments made upon calculi, of a drachm and a half or two drachms in weight, although the solution was frequently renewed, the fragments were diminished in size, but were never entirely dissolved; to produce this result it was necessary to carry the temperature up to the boiling point. The patients, who were made the subject of his researches, were principally those who, before undergoing lithotomy, had been subjected to the use of alkaline mineral waters, whether natural or artificial; and he thinks, from his observations, that those recorded cases of dissolution of large calculi from the use of alkaline drinks alone have been entirely deceptive. He also considers these drinks, when used for so long a time, as productive of certain injury to the general health. There is another objection to their employment of an entirely chemical nature—namely, that the earthy phosphates, when their acids have become partly neutralized by an alkaline regimen, must become precipitated, and form calculi of phosphate of lime and magnesia. On the other hand, the urine becoming ammoniacal in consequence of the diseased state of the urinary organs, may, in its turn, influence the nature of the concretions which become deposited; and this condition varying according to circumstances, and sometimes ceasing for a longer or shorter interval, will give a rational explanation of those concentric and alternate layers of uric acid and of phosphates, which are so commonly found in calculi of these organs. Another important fact, mentioned by M. Prunelle, is, that some patients, as soon as they commence the use of alkaline drinks, void so large a quantity of gravel and uric acid concretion, that if we suppose it as previously formed in the urinary passages, we must allow the bladder a capacity greater than that of the stomach. This consideration would incline one to think that all alkaline waters may very much aid the production of urinary concretions. M. L. then proceeds to state, that desiring to ascertain the real facts on this point, and knowing also that calculi, when entire, resist for a very long time the action of alkalis, he proceeded to experiment upon the fragments left in the bladder after lithotomy. But instead of giving alkalis in drinks, he preferred employing them in injections, throwing into the bladder several quarts of a more or less concentrated alkaline solution. From these injections he sometimes obtained a reduced cohesion between the particles of the calculus, a friability so great that, in some cases, the least pressure of the *lithotrite* was sufficient to break down the stone. But this result was not always constant, and he considers it a question whether it is prudent to employ a means which is so fatiguing to the patient for such uncertain results. Benzoic acid has recently been much lauded in England, as possessing these dissolvent powers to a large extent; but he states that he derived no good result from its employment. The conclusions with which M. Leroy sums up are the following:—1st, Certain acid or alkaline reagents exercise on calculi a dissolvent power, which is principally confined to the mucous matter, serving as a connecting medium between the solid molecules, whether saline or acid. 2nd, Without positively denying the action of alkalis taken as drinks upon the urinary concretions, it is still certain that unless the stone be very small, its dissolution cannot take place. 3rd, Injection is a much more efficacious pro-

ceeding in principle; but when we come to its application, difficulties present themselves, which may be embarrassing to the practitioner. 4th, It is evident that the combination of lithotripsy and lithontriptic remedies must produce better results than the latter means alone; for the broken calculus will present more surfaces for the action of the dissolvent. Still as the first crushing of the stone is the most difficult stage of lithotripsy, would it be advisable, once having attained this result, to abandon a sure means for one more tedious and uncertain?

FRENCH.—*A case of prolapsus of the iris treated successfully by cold belladonna fomentations.* By Dr. Desmarrès.—CASE.—A youth named, Misembié a gold-beater by trade, of a lymphatic constitution, 16 years of age, and living at Belleville, was placed under my care on the 25th of September, 1841. The left eye was sound; the right in the following condition: the eyelids were red and puffed; the conjunctiva, up to the very edge of the cornea, was injected with numerous vessels of a vivid red colour; the sclerotic was in a state of violent inflammation. The cornea was traversed, particularly on its inferior surface, by large red vessels directed towards several spots of interlamellar deposition, which surrounded a large ulceration. This ulcer, which was already of considerable depth, presented along its edges a puriform matter of a yellowish white colour, while its central portion was clean and hollowed out. If this destruction of the layers of the cornea continue in spite of the vigorous antiphlogistic means which I intend to adopt, it must lead to great danger of prolapsus of the iris taking place, which however is not yet imminent. It was impossible to think of touching the ulceration with nitrate of silver, on account of the acute inflammation in the eye, as well as that the action of the caustic would have the effect of destroying a still further portion of the deep layers of the cornea, and thus hastening the period of perforation. The iris, which I discerned through the upper sound portion of the cornea, is inflamed, and turning of a brownish-green colour; the pupil is fixed and contracted, and there is intense intolerance of light. Fifteen leeches were immediately applied on the right temple, gentle friction to be made upon the forehead and temples six times a day with a small piece of the following ointment—mercurial ointment, extract of belladonna, of each equal parts; oil of sweet almonds, q. s. To take a purgative dose of sulphate of soda. Also to commence with the following pills—Calomel, extract of belladonna, of each six grains; syrup q. s.; to make six pills; one to be taken night and morning. 28th of September, the patient's strength is reduced; the ulceration of the cornea seems to have made some progress in depth; its diameter is the same. The injection of this membrane remains of the same degree of intensity as before. The interlamellar depositions are still perfectly separate; (ten leeches to be applied to the same spot; continue the medicines as before.) I did not see the patient again till the 2nd of October; the ulceration seems deeper. I prescribed a solution of belladonna to be dropped into the eye every hour to dilate the pupil, and preserve the iris from prolapsing. Extract of belladonna, ten grains; distilled water, two drachms; filter. The patient to continue the frictions, and take night and morning an antimonial powder, and use a foot-bath. I made him promise to come every day; he is so weak that it is impossible to think of bleeding him. 5th of October, the patient, in spite of my advice, did not return till this day; during the night of the 4th, he experienced suddenly an extremely acute pain in the eye, which has not since left him; this lancinating pain extends

over the eyebrow, the forehead, the temple, and the jaw. I discovered that the iris had prolapsed considerably through the ulceration, the upper eighth of the pupil is the only part left free; the anterior chamber had disappeared, the iris being closely applied to the cornea, which is corrugated in several parts, in consequence of the evacuation of the aqueous humour through the ulceration. The vision of this eye is perfectly gone. I thought for an instant within myself, whether with a view of saving the superior part of the pupil, it would not be advisable to touch the iris freely with a stick of nitrate of silver, so as to provoke an adhesive inflammation between the lips of the ulceration and the margin of the iris; but I instantly rejected this idea for various palpable reasons, of which I will speak hereafter; I then prescribed the following application: extract of belladonna, four drachms; distilled water, four ounces; filter; to keep compresses permanently applied to the eye, after dipping them in this liquid, which is to be maintained at a low temperature; to lie upon his back, and keep as much as possible in this position. The next day, 5th of October, not seeing the patient, I considered that his pains were lessened. 7th October, he came to me in good spirits; the pain had become greatly relieved. On examination, I discovered that the iris had entirely retreated within the eye, its colour was of a brownish green, but deep in those parts which had been prolapsed through the ulceration; with a little attention it was easy to recognise, by its normal colour, the portion which had remained behind the cornea. The colour of the upper part of the iris, which had not been prolapsed, is of a clear blue, forming a striking contrast with the morbid colouration of the remaining part of this membrane; the pupil has regained its round form, but it is immovable and more contracted than on the sound side. The ulceration of the cornea has given place to a deposition of a whitish fibro-albuminous matter of such considerable thickness and resistance as to form the base of a cicatrix, which, I trust, will become solid. The interlamellar depositions surrounding the ulceration are re-absorbed; one of them has already almost entirely disappeared; the anterior chamber is completely re-established; the eyelids are a little puffed. (Continue the belladonna fomentations; take three times a day, in a little sweetened water, one of the following powders: calomel, carbonate of magnesia, of each six grains; divide into six powders; apply eight leeches on the temple to-night; foment the eyelids six or eight times a day with the following collyrium, but it should not be allowed to enter the eye—distilled water, five ounces; cherry-lauel water, six drachms; borax, one drachm; decoction of quince-seeds, three drachms; mix.) 8th of October, the cicatrix is solidified; the *keratitis* is diminished; the depositions are gradually disappearing; the iris seems less red than yesterday; the eyelids are less puffed; (discontinue the belladonna fomentations; go on with the borax lotion.) 9th to 15th of October, the injected state of the vessels has disappeared; the cicatrix is firm; the interlamellar depositions are gone; the pupil is constantly contracted; the iris has almost regained its natural colour: the patient reads as well with this eye as with the other, and at the same distance. I still employ a diluted collyrium of laudanum, in the hope of diminishing the opacity of the cicatrix; which, however, being placed below the axis of the pupil, does not interfere with vision. 4th of December, the cicatrix is remarkably diminished, and in its largest diameter is scarcely more than two millimeters in breadth. This case, says Dr. Desmarres, is one of great practical interest; for when, in spite of all my efforts, *prolapsus* of the iris had taken place,

it seemed to me impossible to attempt its reduction by means of a probe, (as is sometimes done after the operation for the extraction of a cataract,) both on account of the intensity of the inflammation, and because the ulceration was too narrow to allow the iris to be pushed back without danger of tearing it, by the efforts which it would have been necessary to employ; and we should thus have given rise to a traumatic inflammation which could not have been combated by antiphlogistic means, on account of the weakness of the patient. The treatment by the nitrate of silver appeared to me still more dangerous; by cauterizing the prolapsed part of the iris, the most that I could have hoped for would have been the preservation of the superior eighth of the pupil which remained free; but would not the inflammation induced in the eye have prevented this object? Might I not have feared that the caustic would extend its action nearer and nearer to the crystalline lens itself, and thus destroy its transparency? Was I certain by its application to the iris, of inducing the adhesion of this membrane to the lips of the ulceration in the cornea, and thus preventing a further *prolapsus* taking place? Certainly not. But with respect to the employment of the iced belladonna fomentations, it struck me that their application might be attended with greater benefit, both on account of the peculiar action of belladonna on the iris, and also from the effect of cold upon this membrane. Cold, in fact, acts in these cases in the same way as in some inguinal hernias, which Sir A. Cooper has succeeded in reducing by this means, aided by *decubitus* on the back. The happy results obtained in this case should teach us not to despair of the reduction of recent *prolapsus* of the iris, even when the ulceration is but of small size.

THE RELATIVE ANATOMY OF THE BLOOD VESSEL WITHIN THE KIDNEYS.

[From a Correspondent.]

CRUVEILHIER, in his 'Descriptive Anatomy,' has approached nearer to the description I am about to give, than any other anatomist whose works has fallen under my notice. He says, in speaking of these vessels,—

"The renal artery divides into several branches within the sinus, where it is surrounded with fat; these branches pass between the calyces, and then between the cones of the tubular substance, proceeding as far as the commencement of the cortical substance, without giving off any smaller branches; at that point, however, they divide and subdivide so as to form a vascular net-work, the meshes of which are quadrilateral, and of different sizes, inscribed within each other. The largest of these branches embrace the entire base of each pyramid; the smaller pass in different directions through the substance of the bases."

The manner in which the vessels and duct are situated at the hilus of the kidney, I shall merely mention, to assist us in carrying out the continuation of the vessels; and again I shall satisfy myself by describing only the arteries, as the veins are distributed in the same way.

First, *the Vessels and Duct*.—The *vein*—anterior, *duct*—posterior, and *artery* between, after having entered the hilus in this way, immediately at their entrance divide—the artery into two branches, as also does the vein—inclosing between them the ureter, which has now become the pelvis of the kidney.

I have said the vessels divide into two branches immediately on entering the hilus; in man, however, the division often takes place (as is well known) previously, and then after their entrance one set become anterior, the other posterior to the pelvis itself. Having in this way entered the pelvis, they again divide to gain the cortical structure of the kidney. The number of subdivisions are various, as the case may be, sometimes 4, 5, 6, or 7;

but in the dog especially I have found these divisions always at the maximum. The *vessels* in this stage are situated between two layers of the proper capsule of the kidney, (that is, supposing the pelvis to be formed of that substance.) The anterior or internal layer would be the external surface of the pelvis itself, and the other, the proper capsule, lining the internal surface of the cortical structure within the sinus. In this manner they continue until arriving at the point where the tubular portion leaves, or emerges from the cortical to protrude into the pelvis of the kidney. This is seen by the antero-posterior section, at which spot they insinuate themselves between the tubular and cortical portion to gain the periphery of the former substance; in this situation they are farther apart from each other, and instead of merely passing between two layers of the capsule, a perfect sheath is formed, and they traverse the course enclosed in a complete envelope. The sheath appears a joint production of the two previous layers, for if it be examined at its base minutely, it is found continuous with both.

Supposing, then, the vessels to have gained the periphery of the tubular portion, they divide into ultimate branches, and at this moment throw off their envelope, which expands on the bases of the tubuli, and terminates most probably in the cellular tissue of the tubuli themselves.

Certain branches are always found constant; in fact they all are, but, as I shall show, one division of them occasionally receives two or three instead of one. I shall commence their description first, which I have never seen vary. They are three in number—a cortical peripheral, and two tubular peripheral. The former passing through the cortical structure to gain the external surface, in its passage giving off numerous ramusculi, which, with the proper terminal twig, anastomose with similar branches from subdivisions of similar arteries.

The tubular branches are those which pass on the bases of that substance to coalesce with similar branches directly meeting it, and thus entirely encircle the tubular portion. Their origin is immediately after the envelope of the vessels is lost, and their direction nearly at right angles to the proper continuation of the vessel. It is from these branches of the original artery that the proper tubular branches arise, passing as they do from their inferior border, enter the intertubular spaces, continue their course in a straight line without giving off any branches, and forming at their termination a vascular net-work. I have not seen this increased vascularity at the termination of the intertubular branches, but as it was seen and described by Rayseh, it is reasonable to suppose it to exist.

The tubular branches, in addition to forming the intertubular vessels, send off, by their superior border, numerous ramusculi to anastomose with vessels hereafter to be described as the proper cortical branches, and also with the ramusculi from the peripheral cortical branches. These I consider to be almost constant in their distribution, more especially the latter; and now for those which vary in respect to number, and which, from their distribution, might be designated *proper cortical branches*, commencing from the original branch, as do the others immediately after, leaving their sheath to plunge into the cortical structure of the kidney, anastomosing, as I have already said, with ramusculi from the peripheral cortical branch, and from those of the peripheral tubular branches which enter the cortical structure.

These branches, as I have said, vary in number, and to define them exactly would be rather a difficult problem, as I have sometimes seen two, three, four, or five start at once from the common point of origin; but I think on the whole it might be fixed at two or three.

Thus far I have traced the vessels of the kidney into their *nearly* ultimate anastomoses, where I shall leave them, and where, if not for microscopic examination, they would ever be left, and to which examinations, or the accounts of them, I refer the curious, or those more particularly interested in that subject.

The description just given is from the kidneys of inferior animals—viz., from dogs, cats, rabbits

sheep, &c., in all of which the kidney itself is lobular; that is, the tubuli are collected together in an aggregated bundle, and thus require no process or calyces, but empty themselves directly into the *infundibulum*, and from thence into the pelvis. I mention this point merely to explain why the same appearances are not so regularly defined in making a section of the human kidney; but analogy would teach us that they exist in the same way in that kidney also, for while within the *infundibulum*, they are distributed exactly the same, and distinct sheaths can be observed formed for them on leaving that cavity; at this point it is the analogy is nearly lost, as the lobulated structure is apparent with the calyces formed by the *infundibulum*, but in some instances I could trace the sheath of the vessels on the one hand continuous with the calyciform membrane, and on the other with the proper capsule, and hence the analogy is again successful; but the branches denominated *periphero-cortical* do not appear so constant; (in fact they cannot be, for the apex, or sides of a pyramid of malpygi may be immediately above, or corresponding to the base of one below.)

The *periphero-tubular* are always constant, and like those of inferior animals give off intertubular branches and cortical ramusculi.

The proper cortical branches are more numerous, and if we consider the relation of the different kidneys, I think we should have come to the conclusion which is shown by dissection.

TO CORRESPONDENTS.

We give our best and most marked thanks to the very many gentlemen who have sent us district lists with authentications. We have had several pleasing communications from various societies of medical practitioners, who are exerting themselves to suppress empiricism. Why should not every three or four medical men gather together for their own protection? Science, brotherly kindness, and mutual protection, would be only a few of the advantages resulting from such happy unions.

Dr. Games is informed that the honour was not enjoyed by the gentleman referred to.

A. B.—Our Correspondent will see that he has been anticipated. The able work of Tavernier is already translated by Dr. Breicer, and is, we are told, now in the press.

A Subscriber calls our attention to the Qualification Clause of the New Poor-Law Medical Regulations, and expatiates on the hardship of excluding gentlemen who were in practice, before 1815, or are members of the Apothecaries' Company, from filling parochial offices. The subject is one full of difficulties. The poor, on the one hand, are entitled to the best medical attendance at the command of the Guardians; and how make sure of high qualifications except in demanding high tests? If the government are right in requiring that the medical attendant of felons should be doubly qualified, it cannot surely suffer the indigent but worthy sick to be subjected to an inferior kind of treatment. On the other hand, it certainly is very hard that gentlemen enjoying a legal qualification to practise in public—and who, in addition, have had several years' active experience, should be excluded from offices which they have been accustomed to fill—removal from which must convey a public slur on their competency. The plan we would venture to suggest—and we strongly recommend it to the notice of Mr. Guthrie—is, that a regulation should be immediately made by which gentlemen, with legal qualifications, and of a certain number of years' standing, should be admitted members of the College of Surgeons on payment of a moderate fee, without examination. This would remove much severe personal hardship—and, in many cases, great injustice—and would do much to unite and strengthen the body of General Practitioners.

We have received the circular of Dr. Kingsley in reference to the "Medical Benevolent Fund of Ireland." We shall be very happy to receive and forward subscriptions for so good a purpose.

Mr. S.—We have been requested to call attention anew to the Petition for amending the Anatomy Bill, which lies at our office. It certainly is very important that some change should be immediately made. The complaints we hear on all sides make us tremble for the existence of our anatomical schools. Why should France have such advantages over England in the promotion of medical science? The present state of our laws as regards anatomy, is clearly a disgrace to us as an enlightened people.

Dr. Healy is informed that we have not yet published the Medical Charities' Bill.

Mr. Robert Rampleaway.—Will our friend tell us who has been elected to the advertised district by the *Lincoln Guardians*? Mr. Redman, who disgraced his cloth by sycophantly proposing himself to the "consideration" of the *Guardians*, has been rejected, we see, and suffered the lowest indignity a man could be offered. The quack pamphlet of Mr. Butterfield, (a surgeon,) and the newspaper puffs of Mr. Rockliffe, of Theddlethorpe, are truly disgusting. We presume that they have resigned all pretension to the character of gentlemen, and we deem it necessary to recommend a suitable treatment of them by their professional neighbours.

V.—We understand that no important changes will be made as to admissions by the College of Physicians till Sir James Graham introduces his bill.

We shall give two sets of penicillings; one by our brilliant friend Probe, of Distinguished Living Medical Men—the other, by an able assistant, of Distinguished Departed Medical Men. They will appear alternately every fortnight. The first of the latter series will therefore appear next week.

Our Index will be ready with the next number, when No. 33 will be reprinted.

A multitude of Correspondents on various subjects are begged to await our next number. We shall then notice all to whom we have not sent private acknowledgments.

THE MEDICAL TIMES.

SATURDAY, APRIL 9, 1842.

But for one end, one much neglected use,
Are riches worth your care,
To make humanity the minister
Of bounteous Providence.

ARMSTRONG.

WITH an honest willingness to make the most of the recent regulations of the Poor-Law Commissioners, we find ourselves, after increased reflection, as far as ever from being content with them. Looked at either in themselves, or in reference to the circumstances they are kindred to, they are at once petty, insignificant, and contemptible. They bear no conceivable proportion to those notorious public wants which they are intended to supply, or to the demands of the public opinion which called them into existence. Presenting improvements in some things, they are yet incomplete in all, and may very properly go down to posterity as an apt illustration and monumental evidence of that petty legislation on great matters which forms perhaps the distinguishing characteristic of the present age. Tried by any standard they are essentially wanting. The poor they cannot please, for they are not, as a whole, tender or kindly. The profession they will not pacify, for they are not, as a whole, liberal. The public they will not satisfy, for they are not, as a whole, just, and not even partially politic. They are

not only condemned in their pettiness and niggardliness by all who have ever thought on the matter apart from a personal interest, but they stand convicted of contemptible and utter inefficiency by the very Commissioners themselves. These gentlemen, in their Report of December 31, 1839, when the opposition of the public was immeasurably less unanimous, or strong than now, declared that five changes should be made, viz.:—

That the system of tender should be abandoned. That annual medical contracts should cease, and the Union surgeons be appointed as chaplains, clerks, and other paid officers are, for an indefinite period. That the salaries should be computed on an annual list of the regular paupers, and on the separate illnesses of the casual paupers. That the remuneration for the pauper list should amount on the average to 6s. or 6s. 6d. per case, subject to be augmented if the district is extensive; and that the payments for those not included in the pauper list should be on a somewhat higher scale; but the Commissioners are inclined to think that it will not be found necessary to exceed 10s. per case; that midwifery and surgical operations of a serious character to be paid for by a separate charge for each case.

When next we are told of the kind meanings of the Poor-Law Commissioners, the history of this paragraph shall be our short reply. They allowed more than two years, rife with mischief, to elapse before they acted on these deliberate, public, recommendations, and now, when at length they do act upon them, they virtually omit the clause which makes medical officers independent of the guardians, *quandiu se bene gesserint*; leave the question of questions, medical remuneration, as unsettled and unsatisfactory as it ever was, and hamper their only boon, the payment for operations, &c., with a restriction which takes away from it all its value, we mean the restriction requiring a physician's or pure surgeon's certificate in every case of extra remuneration. The Commissioners may peradventure be the well-meaning men some have been cajoled to think them, but if they are, they are the most brainless functionaries England has known since the time of the Messrs. Dogberries and Verges. In the face of conduct so inconsistent—so monstrously self-convicting, it is impossible to save their hearts except at the expense of their heads.

Utrum horum mavis, accipe.

Their limitation of districts, we confess, considered simply as a limitation, is good. As far as it goes, it gives the poor a proportionately better chance of attendance. But it falls far short of our wants. With Serjeant Talfourd in his short Bill, we believe that there should be no districts of greater area than 8,000 acres, nor containing, if of that extent, more than 4,000 persons; and we know that medical officers feel that they cannot be sure of doing justice to parochial patients with charges more extended. Mr. Guthrie's opinions on this point are still stronger than ours, and deserve quotation.

The *quantities* (he says) assigned by the order, are both one-half too large for one medical officer, it being impossible that the sick poor can be justly and fairly attended to by him. In all such cases the medical officers should be multiplied. No one should be allowed to go three miles from his own door if it can be avoided, and if there should happen to be eight, ten, or more parishes, in any of these unions, and a qualified practitioner can be found in every parish, he should be employed and held responsible for his own conduct, but not for that of any of his coadjutors.

These are opinions shared by all of our profession who have studied the subject, and we cannot imagine a sane reason why the Commissioners should scruple to have made them the basis of a general rule. If divisions of districts necessarily inferred increased expense, we could understand their backwardness. But it is easy to see that the more union appointments are made compatible with private practice, the greater will be the number of respectable candidates, and the more conveniently and cheaply may their duties be performed.

It certainly is a singular feature in the new regulations, that so pompously pre-announced, and so anxiously expected, they yet make not the slightest reference to the vexata quæstio—the hinge of all other questions—medical remuneration. Much as we deprecate procrastination on so vital a matter, we shall yet not repine at the delay, if it lead, as it should, to that enlarged and liberal system of dealing with medical gentlemen which accords with the suggestions of a wise and just policy. Our own impression is in favour of a plan by which all the inhabitants of a district, not capable of paying for medical attendance, shall be registered in the way proposed by the Commissioners in reference to permanent paupers, and the medical attendant paid at a fair average rate of so much per head, in proportion to the number thus placed under his charge. While we should thus escape the murderous system of requiring orders—which in many cases can only be procured when too late to allow of any benefit from them—we should provide permanent medical relief to a class of our countrymen who, if they do not receive it from the state, are condemned by the profitless nature of their employment to depend for it on casual charity, or perish under its total bereavement. We should extinguish these unseemly squabbles and bargainings so mischievous to the poor, and so derogatory to a respectable profession; and, above all, we should make it impossible for rate-paying Guardians to yield to the natural temptation of saving their expenditure by a parsimony not without its danger to human lives. This is the system of our preference; but we shall not quarrel with any other, provided it be conceived in an analogous spirit, and carried out on principles similarly enlarged. It is not the form, but the matter it embraces—not the letter, but the spirit, which we concern ourselves about.

We need not say, however, that anything akin in spirit or feeling to our present heterogeneous and barbarous system will meet with the opposition which a flagitious system requires, and the contempt which such petty changes so properly invite. There must be something *essential* done. We cannot for an instant comprehend on what principle of sense or justice the Commissioners can pretend to justify their present mode of doling out medical attendance to the poor. If ever there be a time when an indigent fellow-countryman is entitled to commiseration and assistance, it is surely on his sick bed. That surely is no time to subject his comforts to the rigid rules of the severest parsimony, to set the chances of saving his life against the chances of saving some small increase of his neighbour's expenditure, or to make him one of countless other miserable instruments in solving the perillous problem, how the sick poor may best have the semblance of medical attendance while least touching the aggregate wealth of the affluent. To give liberal alms to the *strong* and the *healthy*, may, as they tell us, encourage idleness and pauperism: but where is the mischief that can spring from generous medical relief to the sick? Men will feel no anxiety to be ill, because illness entitles them to careful medical attendance. Doctors may do their duty kindly and attentively, but no one will be the more inclined on that account to have a diseased liver, or a broken leg. Our Commissioners act, or rather—for we will give them the benefit of their *possible* repentance—have acted as if they had an insupportable horror of a poor patient getting too good attendance. They have laboured under a dire form of disease, which may be termed *comfort-phobia*. Now, we beg to tell the gentlemen, that the comfort of a sick pauper, or that equal horror to them, a little extra medical remuneration, are not really such horrible things as they imagine; and that viewing the catastrophes in their most heinous aspects, they may be found after all less calamitous than the systematic degradation of a respectable profession, or the occasional manslaughter of our poorer fellow-citizens. Perhaps after reconsidering the matter in the interval they have allowed themselves, the Commissioners will agree with us, that the economy which has reference to human life, is quite as important as that which takes into account the current pence of the realm, and that though neither national morality nor national prosperity may suffer because a few coined minerals are differently distributed, yet that both may be rather seriously in question when human lives are placed in jeopardy in the service of a *miserly* and essentially *ungrateful* parsimony.

LEGAL ACTION.—A Mr. Roberts, a druggist of Cheltenham, was prosecuted by the Apothecaries' Society at Gloucester, and was convicted in a penalty of £20. The other penalties were allowed to lie over, on condition of the defendant not practising again as an apothecary.

CASE OF SPONTANEOUS PERFORATION OF THE STOMACH, WITH OBSERVATIONS.

By JAMES B. THOMPSON, M.D.*

CASE.—Maria Martin, ætat. 26, unmarried, of nervous temperament, previous good general health, and of very active habits, menstruated regularly, had never complained of any gastric derangement, but was, when in the act of putting on her stays, suddenly seized with an acute pain in the region of the epigastrium; this was at eight o'clock in the morning, and continued to increase hourly. Dr. Thompson visited her at twelve o'clock, and found her labouring under the most acute and seemingly excruciating pain, which she, from her own description, said was confined mostly to a particular part of the stomach, pointing out a *spot* about an inch to the left of the xiphoid cartilage. He directed leeches at once to this part, and afterwards the cupping-glasses to be applied, and the bleeding to be encouraged by stupes and poultices of bran, occasionally changing to camomile and poppy stupes. She was put into a hip-bath, and after remaining in it for about twenty minutes, she was removed into bed and got an active aperient draught; the leeches and cupping seemed to give her very considerable relief, and the draught had operated twice during the day. She had some undisturbed sleep. The pain returned again at eleven o'clock that night, and seemed to be considerably aggravated, and to occupy the greater part of the abdomen. Dr. Thompson again saw her at two o'clock a.m. next morning, and found her rapidly sinking, and in a somewhat comatose state. It was then only that he was fully satisfied that this patient's case must have been one of spontaneous perforation of the stomach, and that the diffuse peritoneal inflammation then present was owing to the extravasation of the fluid contents of the stomach into the peritoneal sac. She gradually got worse, notwithstanding everything that could suggest itself having been done for her, and died in or about *thirty-five hours* from the commencement of her attack: had some difficulty in getting the friends of the patient to permit a post-mortem examination in this case; but, however, they allowed him to examine her stomach, and in doing so twenty-two hours after death, the following remarks were noted down at the time. In the outward appearance of the stomach there was nothing to attract notice, but in opening the stomach it presented a generally inflamed surface, and on closely examining its parietes, there was found in the lesser curvature a somewhat oval opening in the mucous membrane, the sub-mucous coat was also similarly perforated, but the opening in the serous coat was not observable on the outer surface at first sight; it was only to be noticed (unless very minutely examined) by passing a probe from the opening in the mucous coat; it was a somewhat oblique *slit*, not exactly corresponding to the opening in the inner coats; there was near a pint of the fluid contents of the stomach extravasated, and the peritoneum presented a very general and diffuse appearance of inflammatory action having previously existed. Dr. Thompson was not able to make any further examination from the anxiety of the friends. But this young woman seemed in every other respect to have been in pretty good general health, and her friends told him that she was always considered very healthy.

Observations.—The foregoing is an instance of a very peculiar form of disease, and which seems to be confined to a *point*, and terminates in ulceration. The time varies from *twelve* to *thirty-six* hours, as was near about the time at

* Communicated to the London Medical Society by the late President, Dr. Clutterbuck.

which this case proved fatal—we hardly ever have an opportunity of seeing the stomach when this affection is commencing. Some are of opinion, that it does not prove fatal during the early or inflammatory stage—as would appear to have been the case in the foregoing instance; the ulcer by itself does not often destroy life, but it permits the fluid contents of the stomach to pass into the peritoneum, and thence the resulting peritonitis that proves so fatal.

The ulcers in these cases are generally of various sizes, varying from the size of a sixpence, as was the case in this instance, to that of a half-crown piece. In the more chronic cases the ulcers are likely to be larger and better defined about the margin of the ulcerated part.—They invariably are oval-shaped or somewhat rounded, particularly on the mucous coats, and would present in the more recent cases the appearance as if *punched out*. There is another remark which is generally observed in similar cases, that is, that ulceration is mostly noticed in or about the lesser curvature, or its posterior inferior surface.

It has been stated that these ulcerations are of somewhat a cancerous nature; but the author of the paper apprehends this is a mistaken notion, and quite contra-indicated by our present knowledge of cancerous affections generally, as we see these cases occurring most frequently in persons in the prime of life, who have had no symptom of cancer about them; besides, it is now very generally admitted that cancerous affections are more frequently observed to occur at a later period of life. Besides, there is not that indurated feel either in the neighbourhood of these ulcerations, which is so common and general an indication of the disease of cancer. The appearance of the ulcer, and its general history, would, the writer imagines, be a sufficient proof that it first had its origin in the mucous coat of the stomach, and not, as is invariably the case in scirrhus affections, in the submucous tissue. Besides, we have more of the mucous coat destroyed in these cases than of any other membrane or tissue.

The symptoms of these diseases are at first rather obscure. In many cases the general health appears good, often no complaint is made till some short time before death, when a most painful and violent train of symptoms present themselves. It would also appear that the nervous and muscular coats are engaged at the same time with the mucous coat—and that it is only when the serous coat becomes engaged that these acute symptoms generally exhibit themselves. Then, either the peritoneal coat bursts or rather gives way, the contents become extravasated, and a fatal peritonitis will ensue, or perhaps a degree of partial inflammation may be produced in a small portion of the peritoneum, which the ulcer has extended to, but not yet quite destroyed—lymph is thrown out, and adhesion takes place between that particular point and some adjoining viscus, and it is in this manner that life may be preserved for the time being. *Beclard's case* was a remarkable instance of this nature—he died of a disease of the brain, and there was a cicatrized appearance observed about the lesser curvature, half an inch from the cardiac orifice; it was about the size of a shilling, its surface depressed and traversed by bands, one of which passed across the centre and divided it into two *lacunæ* whose base rested on the peritoneal coat.

Recamier makes mention of a case in which the pancreas formed the base of a cicatrized ulcer of the stomach; the patient had died of another complaint. *Cruvelhier* and others do not consider such cicatrices are of very rare occurrence.

Usually, however, the ulcer in these cases

destroys life, and in *one of three* ways generally—first, by gradually exhausting the patient's strength, by pain, vomiting, and so forth, frequently aided by disease of the intestines, liver, spleen or pancreas, with perhaps occasional dropsy—second, by hæmorrhage, which is either the result of slow and often repeated oozings of blood from the ulcer, or may be more sudden from a large vessel which the ulcer eventually opens—third, by the more quick and violent death which follows perforation of the stomach, and the consequent extravasation of its contents into the peritoneum. In these suddenly fatal cases, the patients may be taken off in *ten or twelve* hours—that is, before peritoneal inflammation has fully set in, simply from the shock which the nervous system has sustained, and from which it cannot afterwards rally; we see this occurring daily in cases of severe or extensive scalds or burns, or other similar very serious lesions or injuries, or a violent peritonitis, perhaps, at first, circumscribed, but soon becomes diffuse, and puts a period to the earthly career of the poor patient in from *twenty-four to thirty-six* hours. The diagnosis of ulceration is most difficult; indeed, the author of the paper is of opinion, that we as yet have no pathognomonic symptoms whereby we could distinguish this disease from other affections, such as *gastrodynia*, *scirrhus*, *functional dyspepsia*, *chronic ulceration* or *chronic inflammation*. There is mostly vomiting and irritability of the stomach; but it has been seen without these. There is often *pyrosis*, and it also is often absent. In some cases, a wasting of the flesh is remarked, but in others the "*embonpoint*" is retained. It would appear that persons remained in apparently perfect health up to the moment at which the ulcer gave way. Dr. Abercrombie gives a case of this kind, and another case is recorded in one of the Dublin journals, of a young lady who went to church in excellent health, had never complained of any gastric disturbance, but was suddenly seized, while in church, with the symptoms of effusion into the peritoneal sac, and expired in *thirty-six* hours. The post-mortem in this case showed a perforating ulcer with *effusion* and *peritonitis*.

A circumscribed inflammation, which is, perhaps, more dangerous than a diffused one, because more apt to be followed by ulceration, may have only slight dyspeptic symptoms, or may even escape notice altogether until the ulcer has perforated the stomach, and then be followed by the fatal peritoneal inflammation. In the more chronic forms of these affections, the mucous membrane seems thickened, its papillæ considerably developed, the degree of redness varies in shades of colour, from a *dusky-brown* to a somewhat *livid* or *leadens hue*, often on detached patches *here and there*, where it would appear that ulceration would at some future period take place.

It is well worthy of notice, in a practical point of view, that such cases as those referred to in the preceding paper, are more generally met with in the female than in the male sex, and between the ages of *eighteen and thirty*, and mostly in unmarried women. It would be very interesting to inquire if the gastric juice possesses any more active properties at this period, and in this class, than under different circumstances, for it would appear that those persons have all been apparently in good health up to a short period before their death. It is also very remarkable, that all the cases on record are stated to have been found perforated in or near the lesser curvature: could there be any difference in the distribution or arrangement of the circular or oblique muscular fibres in this part, that would favour the supposition of losing its vitality more easily than other parts, and

thereby facilitate the corroding action of the gastric juice on the coat of the stomach, and hence be followed by all the fatal and nearly instantaneous consequences referred to? It does not appear that the cases recorded, in which the edges of the ulcers are said to be very much elevated and thickened, are of recent occurrence; it is more probable that these are of a chronic form, and would no doubt, if watched closely, be found to be attended with all the varied and anomalous symptoms complained of by the dyspeptic patient, accompanied invariably by obstinate constipation and inactive liver; in fact, a deranged state of all the chylopoietic viscera. A very interesting debate followed the reading of this paper, in which the views of the author were corroborated very generally as to the difficulty of diagnosis, and as to whether, should it chance to have been detected at first on seeing a patient, what would be the probable and most judicious way to proceed with a view to any ulterior benefit; for at present we are not enabled to point out any feasible practice likely to subdue the disease, or arrest the progress of its tendency towards a *quick* and fatal *termination*.

PERITONITIS.

From the Note Book of Medicus.

Is characterized, and for the most part preceded by rigors, an aching pain in the limbs, languor, great lassitude, and palor of the countenance; succeeded by a burning pain in the belly, of a lancinating and most acute nature, which is greatly aggravated by pressure, so much so, in fact, that the patient at times is incapable of sustaining the mere weight of the bed-clothes. It is, also, much increased by any effect of the body; as, for instance, sneezing, coughing, going to stool, or even making water, and in truth everything which may tend to disturb the position of the patient.

The patient rarely has intervals between the attack of pain, and although it is sometimes alleviated, still there exists a constant burning sensation. The patient for the most part lies on his back, when occasionally the respiration is hurried, from the breathing being carried on by the muscles of the ribs alone, from great fear of the descent of the diaphragm; the bowels, which are sometimes relaxed, are not infrequently obstinately confined; nausea and vomiting occur, and when the lower part of the belly is affected, the sickness is less severe, and vice versa.

The tongue is generally but slightly affected, with merely a little whiteness; in some cases the margin appears highly vascular, and also we have a brown and furred tongue. The skin is hot and dry; the urine high-coloured and scanty; the pulse contracted, small, and hard, resembling much the vibration of a fiddle-string, and for the most part quick; although in some instances we have a soft and incompressible pulse.

Tympanitis most frequently occurs; and at a later period of the disease, the belly becomes doughy, large, and distended, and again tympanitis will supervene.

If the disease prove fatal, the vomiting and tympanitis become more and more severe, and the belly will have a fluctuating feel; the voice becomes feeble; the pain then soon ceases, sopor or delirium come on; the stools and urine pass away involuntarily, and death ensues.

When the attack is less severe, the patient upon recovering is able to move better, and we find him reclining a little on either side, the sickness abates, the bowels respond to the administration of remedies, and the pulse becomes much softer and slower.

When, however, the disease occurs in broken

down and debilitated constitutions, the patient's sufferings are generally less severe, and it soon passes off into the typhoid character, and death invariably follows in the course of from two to three or four days.

I am disposed to believe that puerperal fever is some disease mixed up with peritonitis, and that it is merely involved, and forms part and parcel of the general constitution of the disease.

Morbid appearances.—The peritonæum will generally, in some part of it, be found to be minutely injected with blood. The convolutions of the bowels closely glued together; and there will be found serum, in which flakes of lymph are observed to float, and sometimes pus in considerable quantities effused into the cavity of the abdomen.

Ulceration of the peritonæum has been met with, but it is a rare appearance. Such is the general character of peritoneal inflammation, whatever part of it may be involved. In old persons you have little albuminous deposit, chiefly serum; and such is the effect of peritoneal inflammation caused by animal poisons.

In common peritonitis, I have never known gangrene.

Predisposing causes.—It is sometimes said to be epidemic; the most common period of attack is at the middle of life, and it attacks women more frequently than men, doubtless on account of the obstruction which they are liable to. It is frequently combined with renal diseases: distention of the abdomen, by pregnancy, and the operation of tapping for ascites, not unfrequently produce it; the most exciting cause perhaps which we have, is that of cold and damp, also mechanical violence, hernia, rupture of the bladder or stomach by ulceration, or sudden check to a diarrhoea; fistula in ano, obstruction of the menses, the extirpation of the testicle, phlebitis, animal poisons, and contagion.

Diagnosis.—Enteritis is sometimes complicated with peritoneal inflammation, and may be distinguished by the acute pain of the latter, being so much aggravated by the least exertion: in enteritis the parietes of the abdomen are more flaccid, and pressure is more easily borne, is of a more griping nature, and is not so pungent and prickling. The substance of the tongue is but little altered in simple peritonitis, whereas in mucro-enteritis, it is remarkably injected; the pulse in peritonitis is hard and contracted; the face is more turgid in mucro-enteritis. There is more or less diarrhoea in mucro-enteritis contrasted with the constipation concomitant in peritonitis. It may easily be distinguished from colic, because in colic relief is found from pressure, and as it is not an inflammatory disease there are no rigors, &c. Neuralgia affecting the abdomen is of such a character as sometimes to set at defiance all diagnosis. However, inflammation is almost always absent, and is accompanied with little or no fever; the distinction between the two is by no means easy, however much may be learned from inquiry into the habits of the patient. The pain frequently remits and is much too severe for peritonitis.

If I hear a young female shrieking violently from a pain in the abdomen, I always say there is no peritoneal inflammation there.

A similar state not unfrequently occurs after delivery, mixed up with an affection of the womb. Tympanitis is frequently mistaken for it, and may be distinguished from it by the peculiar tympanitic sound, the absence of fever, &c. Rheumatism may be distinguished by the history of the case, and the white moist and milky tongue, bounding pulse, and moist sweating skin: there remains still another evil with which it may be confounded, which is an over-distended bladder; if you take proper pains

and have your wits about you, you cannot mistake it. An over-distended gall-bladder may be mistaken for this disease, as also the passing of a gall-stone from the gall-bladder.

Prognosis.—Acute peritonitis, if general, is almost always a fatal disease, and our prognosis will be guided according to the severity or lightness of the symptoms present. When the constitution is good, and you are called early, and the inflammation is not universal, our prognosis may be favourable, and vice versa. Our prognosis will be favourable when the patient bears pressure better, and can move easier, when the countenance bears a more cheerful aspect, the pulse becoming fuller, softer, and slower, and the bowels respond to the medicines offered. The unfavourable symptoms will be the reverse; there will be hiccup, a small, rapid, thready pulse, and great prostration. When it proves fatal it occurs in the course of from two to three or four days.

Treatment.—Active blood-letting, both general and local, and bring the patient under mercurial influence as soon as possible. You cannot depend on, nor ought you to be guided by the smallness and weakness of the pulse, and want of strength of the patient: administer three or four grains of calomel, with a grain and a half of opium; and if nausea and sickness are absent, half a grain of ant. pot. tart. may be added, followed by repeated doses of calomel and antimony, until the mouth becomes sore, omitting the opium, as it is liable to mask the pain, and lead us into error. If the patient's pulse becomes full, the crassamentum hard and buffy, bleed again. The more general the inflammation, the better effect is produced by a large number of leeches; after the leeches, warm fomentations may be applied, or poultices, if their weight can be borne by the patient. As regards purging, I would say, don't regard it, but persist in the administration of calomel and antimony, for a day, or a day and a half, and if then the bowels fail to act, assist them with castor-oil, or salts, or enemata. I have great objections to blisters, for if you apply blisters, you are for ever in the dark afterwards, inasmuch as you cannot ascertain by pressure how you are going on, and at the early period I hold them to be decidedly objectionable. If the patient be convalescent, you must take care to keep him in his bed, and not to allow him to use the slightest action or exertion; and if the irritation continues, a blister, or some other counter-irritant may be applied; if perspiration should prevail, we may administer sulphuric acid in the infus. ros. comp., &c.

ORFILA ON PRUSSIC ACID.

Prussic acid is sometimes developed in man in health and disease.—Without attaching any importance to what has been said of some blue urines which contained Prussian blue, of the accuracy of which statements I am not at all assured, I can affirm that, in certain circumstances, the sweat of persons in health, especially that of the arm-pits and the genital organs, exhales an odour of prussic acid. Brugnatelli analysed the urine of dropsical persons where this substance existed. In a case of ascites, Coldefy-Dorhs states that he found prussic acid in the serum extracted by puncture. Do we not know that Tiedemann and Gmelin obtained sulphocyanate of potassium from the saliva of two persons, one of whom did not smoke, and that Treviranus had already suspected the existence of this salt. (*Journal de Chimie Medicale*, 1833.) I will add, that it would be unreasonable to deny the possibility of the spontaneous formation of prussic acid in some pathological states. We know that, under the influence of certain agents, such as caloric, nitric acid, the alkalies, &c., the carbon, hydrogen,

and nitrogen of organic matters combine, in proportions suited to produce this acid, and sometimes cyanogen only, and shall we not admit that, in certain diseased conditions, not yet known, carbon, hydrogen, and nitrogen may combine to form prussic acid! Would there be in this anything more astonishing than what we every day see when the urine is loaded with sugar of grapes, as in diabetes, or when it contains *cyano-urine*, or still more when calculi are formed of cystic oxide or xanthic oxide, newly formed substances, which certainly do not exist in our tissues or fluids in the normal state?

It is not demonstrated that prussic acid is not produced at a certain period of putrefaction.—We are far from knowing the different products of putrefaction in air, in earth, in water, in cesspools, &c.; still less do we know at what periods of putrefaction these products are developed; we are completely ignorant of the modifications they may undergo as respects their nature and the time they appear, according to the nature and duration of the disease that has caused death, the age, the constitution, &c. of individuals. But we know that in all cases of putrefaction, the constituent elements of bodies are disunited to combine in a different way, and form new compounds; sometimes it is water, carbonic acid, acetic acid, ammonia, carburets of hydrogen, &c., that are disengaged, carrying with them a portion of semiputridified matter, which renders them so fetid; sometimes it is ammonia, fatty acids, lactic acid, yellow azotized matters, soaps, that are formed. Who will venture to affirm that, in certain circumstances, putrefaction does not generate, at a period more or less near death, prussic acid, as well as it produces ammonia, acetic acid, &c.? Who will affirm also, looking at the facts I have related, that there are not developed during putrefaction substances capable of reacting on nitrate of silver, the sulphates of iron and of copper, in a manner analogous to prussic acid? It is therefore necessary to be on our guard, and, when we are called to pronounce as to the existence of prussic acid in putridified organic matter, to use some reserve in the terms of our report. Not that I mean that on account of the possibility which I admit, we must be always undecided and can never be able to conclude that there was poisoning with prussic acid; such a view would not be tenable, where, for example, a person had exhibited the symptoms which prussic acid constantly produces, where the cadaveric changes were analogous to those observed in poisoning with this acid, and where there were found in the matters contained in the digestive organs, or in these organs themselves distilled in water at a gentle heat, sufficient prussic acid to characterize it distinctly, because at the same time that we are ignorant of what exactly takes place in the different periods of putrefaction, it is established, for the first stage at least of putrid decomposition, that the digestive organs distilled with water do not produce liquors that exhibit the marked characters of prussic acid; I only say that we ought to be very circumspect, when, as in the present instance, the prussic acid has not been characterized, and that several of the reactions obtained with the suspected liquor may be confounded with those afforded by liquors prepared in the same manner from putridified organic matter alone.

It was not impossible than prussic acid had been introduced into the intestinal canal of M. Pralet after death.—I have particularly applied myself to demonstrate that it does not follow from the researches of MM. Bebert and Calloud that prussic acid existed in the organs of M. Pralet; the experiments and consideration, which I have made use of to combat their asser-

tions are so irresistible, that there cannot be a doubt on this point; it is sufficient to state that I am very far from thinking that there was prussic acid introduced into the digestive canal of M. Pralet after death. However, as it may be, that certain minds, relying on the analysis of MM. Bebert and Calloud, continue notwithstanding what I have said, to confide in their experiments, it is important to make them feel that it was not impossible that this acid had been introduced into the dead body, either by the mouth or by the anus. Let us for a moment reason on this hypothesis, and see if all the facts cannot be admirably accounted for. Pralet dies of an attack of apoplexy; after his death, water containing a small quantity of prussic acid is thrown up into the rectum, which, by cadaveric imbibition, reaches in five or six days the organs of the abdomen and chest,* these organs now putrefied are submitted to distillation with water; the distilled liquors are examined, and some of the characters of prussic acid, mixed with altered organic matter, are recognised. The prosecutor lays hold of this element, and, as it is said, on the other hand, that M. Pralet died with the symptoms of poisoning by prussic acid, and that the alterations found in the dead body are such as this poison produces, he feels himself sustained in admitting a poisoning, and seeking a criminal! See, then, what facts badly observed, and consequences lightly deduced, may lead to; an attentive examination is sufficient to overturn all this scaffolding, and to prove that the symptoms and lesions are the result of an attack of apoplexy, and that if it be insisted that prussic acid was found in the body, it could have been easily introduced after death.

REVIEWS.

Acaromachiu, vulgo certamen Medicum de Acaro, &c. Per J. Ed. Feldmann, Facultates Medicæ Vindobonensis, &c.

THE above is the title of a small but well-written pamphlet on the *Acarus Scabiei*. The author commences with a succinct history of psora, and the subsequent observations may be arranged under the following three principal heads:—

1stly. He treats of the existence of the insect to which the name of *acarus scabiei* had been given, and of the various opinions entertained concerning it by physicians.

2ndly. He undertakes to show that the animalcule so called is not the *cause*, but the *effect* of the disease; and lastly, he concludes his observations with a brief review of the means of curing the disease.

Dr. Feldmann deems the *acarus scabiei* to be peculiar to the human species from not having been able to detect it either in dogs or cats, though covered with the eruption denominated

* It results from numerous experiments which I have lately made, and which are detailed in my memoir on poisoning with the salts of copper (see *Memoires de l'Academie Royale de Medecine*, t. 8), that all poisons dissolved in water, and introduced into the stomach or rectum of a human corpse, still warm or grown cold, traverse the tissues of the digestive tube, and arrive by degrees, in a shorter or longer time, and by means of *cadaveric imbibition*, at least to the surface of several viscera. In the present case, the prussic acid would therefore reach some of the organs of the body, if it had been injected after death, and communicate to them the odour that characterizes it; it is therefore a serious error to assert, as Messrs. Rey and Goubert have done, in the deposition of the 20th February, that, on the supposition I have made, the tissues of the viscera submitted to their examination could not have had the smell of bitter almonds.

itch in these animals; and lest his opinions should receive the mead so often conferred on those deviating from the beaten tract, he becomes eloquent in his denunciations against those who, with unreasonable narrow-mindedness oppose themselves to any innovation in medical practice or theory. 'Jam autem,' says the Doctor, 'ferme omnibus notum ac exploratum est, hujus generis empyricos medicos, rerum innovandarum, maximos simulque infensissimos hostes esse; qui quasi uno agmine facto, voce tergimini rauca, hinc illineve clamitant, incessanterque auras veberant, et mundum perturbant, dicentes—*Absit innovatio! auferatur nova detectio! erux præparatur Prometheo, etc., etc., similia.*'

The author admits the existence of an insect in scabies, and says that it can readily be found in the itch pustule 'tempore puris florentes'—(at the period of the maturation of the pus); and that the fact had been known in Italy as far back as the 16th century. The itch insect possesses this peculiarity, that while every kind of *acarus* is immediately killed by being put into water, it will survive the immersion for some time.

The author next discusses the question respecting the existence of the animalcule prior or posterior to the formation of the pustule. Some maintain that the insect insinuates itself under the skin, and, like a vampire, subsists by sucking blood, while the irritation excited by its presence and occupation, gives rise to the intolerable itching, to the inflammation and pustules which characterize the disease; they, moreover, believe that the animal can pass from one pustule* to another, moving upwards and downwards, to the right or to the left, with the greatest ease—'Quod est plane terrificum,' exclaims the doctor, 'ac non minus mirificum?'

The description of the animalcule by different writers is not less discrepant than its powers, a circumstance which the doctor explains on the supposition that none of them had ever seen the insect they undertake so minutely to describe, and even to delineate. The author tells us that if a pustule be opened shortly after its formation, and its contents carefully examined, no animalcule will be found; but if it be opened when the pus has been matured, then it may be discovered without difficulty: from this he infers that the animal is generated by the process of corruption going on in the pustule. Another of his opinions is, that the insect cannot be transmitted from one person to another; and he comes to this conclusion from the fact, that the animal is destitute of any means or instrument of making a perforation or fissure in the skin through which it could enter.

Dr. Feldmann acquaints us that from the year 1836 he has been prosecuting his investigations on this subject, and in the interval had many opportunities afforded him of doing so both in Italy and Germany, but more particularly still in France; and it would appear that the following circumstance gave a direction to his researches, and finally led him to adopt the opinions he now promulgates in the pamphlet before us:—In the year 1839, he had occasion to open a whitlow in the index-finger of a patient, and took the precaution to receive the pus in a vessel containing water, and on carefully examining the vessel, he perceived several living *acari* swimming in the liquid. The patient, Dr. Feldmann assures us, had no symptom of itch about him at the time, nor ever had had at any previous period of his life; neither did any symptom of the kind ever evince itself, whilst he remained under his care.

From these, and many other observations which the author has had it in his power to

make, he has deduced the following conclusions:—

1st. That in an individual disposed to Scabies, the number of animalculi generated is in proportion to the number, size, and degree of impurity (*prævitæ*) of the pustules; that they multiply in number as the pus matures, and that they die as soon as the pustules begin to desiccate.

2ndly. That before the second or third day of the suppuration, no animalcules are to be seen.

3rdly. That with the progress of the maturation, the itching, sense of heat and irritation, increase *pari passu*—a circumstance which the author attributes to the progress and degree of vitality possessed by the insect.

4thly. That scarcely a pustule in scabies is to be found without an *acarus*, (which, by the way, he calls a *pediculus*—*Pediculus suppurationis*), provided it be examined at the period of its perfect maturity, adding his belief, which to us, we must confess, appears more than doubtful, that both in whitlows and abscesses, and perhaps even in the pustules of variola, these *pediculi* exist. He therefore concludes that, since these animalcules are only to be found in the human body, a peculiar and singular nature of pus is requisite for their production.

In the treatment of the disease, we have discovered nothing very new or interesting. It seems that in the Vienna hospitals, the physicians depend much upon the efficacy of warm baths, and ablutions with black (soft) soap and water.

To conclude, we have had much gratification in the perusal of this little brochure; the latinity is pure and classical, and the author (granting his facts and observations to be correct) has thrown a new light on the relation between the disease and the existence of the animalcules found in psorous pustules. Practically speaking, however, we must acknowledge that this kind of investigation is not much in our way.

An Investigation of the proposed Scheme of Practical Reform, in reference to Chemists and Druggists. By G. Crook.

THE booksellers say, that of all unsaleable things the most unsaleable is a pamphlet. If Mr. Crook be a type of his brother pamphleteers, the reason is obvious. Exhibitions of folly and nonsense are too common to be anything but gratuitous, and if gentlemen like Mr. Crook will persist in mirroring their diseased mental organizations in brochures of a shilling each, there is luckily no act of parliament to compel people to purchase them.

Mr. Crook seems to be one of those busy persons who imagine that because they feel they must needs *think*, and that because they can black paper they must needs be public instructors; and hence we have a piece of workmanship published which a penny-a-liner would not deign to own, and in which some vague and conflicting notions about the preservation of "Druggists' privileges," play hide-and-seek in a farrago of ill-jointed words, in which aim, plan, and meaning are alike absent. Mr. Crook has, however, from his peculiar habits, some little extenuation in perpetrating a publication. Accustomed to prescribe medicines where lives were in question without the necessary knowledge, he is not likely to be alarmed from authorship by any apprehension about want of qualifications.

It would be a good cause that would pass unharmed through the ordeal of such a writer's advocacy; and considering that *his* cause is the *right* of druggists to prescribe, we may truly say—

Non tali auxilio,
Nec defens oribus istis tempus egit.

On the Madhouse System. By R. Paternoster. THIS is a more sensible pamphlet of a reputed madman. A lunatic humorously explained

* The author appears to use "pustule," in the sense both of vesicle and pustule.

his tenancy of an asylum, by declaring that he thinking the world mad, and the world him—the latter, on trying the question, had outvoted him. Mr. Paternoster seems to have a similar notion, extending his favourable opinion, however, to every inmate of Bedlam. Many of his statements are startling, but the writer's zealous partizanship and position, severally prevent our placing that confidence in his data which would be necessary for a more extended notice.

THE EXTRAORDINARY OPERATION.

To the Editor of the 'Medical Times.'

SIR,—As a sequel to my former letter, I beg to forward the enclosed extracts from yesterday's number of the 'Sunday Times.' The "extraordinary operation" has no doubt produced as great a sensation among the readers of your journal as it did when it became known to the pupils of the hospital. "Westminster Hospital.—The young woman upon whom the operation of transfusion of blood, mentioned in last week's *Sunday Times*, had been performed, is declared out of danger, the experiment having fortunately been completely successful."

The extraordinary fellow and the poor secretary vow vengeance dire on any one who shall be discovered communicating remarks to any of the medical journals on the proceedings in this case. No pains will be spared to discover the offender; and should a pupil be detected who is suffering under this "*cacæthes scribendi*," what is the threatened result?—Expulsion!!

Nothing was said as to the awful fate that awaits the reporter of the *Sunday Times*. Whether the little porter in the hall and the mysterious looking surgery-man have orders to "give him a drubbing" when he next appears, is yet a secret.

A JUNIOR STUDENT.

April 4, 1842.

ON THE DETECTION OF ARSENIC IN COMPLICATED LIQUIDS.

By GEORGE FOWNES, Esq.

To discover and identify arsenious acid when in a state of purity, or when merely dissolved in water, is a problem so simple that those whose chemical experience has been but small can meet with no difficulty worthy of the name. The precipitate with sulphuretted hydrogen, the peculiar compounds with the oxides of silver and copper, and the reduction-test in a glass tube with a few fragments of charcoal, are all as simple and easy as anything of the kind which Chemistry presents. The same may be said of the sulphuret orpiment, which by the aid of a little alkali and charcoal powder, yields up its metal with the greatest ease.

When, however, as is very frequently the case, a very minute quantity of the poison is mixed up with a large mass of complicated organic liquid, such as soup or gruel, or milk or beer, then the case is altered, and the inquiry becomes very much more difficult; the ordinary tests are quite useless; and if an attempt is made to throw down the metal by sulphuretted hydrogen, and then to reduce the orpiment, the organic matter, which precipitates with that substance, ruins the subsequent reduction process. Moreover, in these viscid liquids a precipitate settles down very slowly or not at all, and filtration is impossible.

The most important of the almost innumerable processes which have been proposed, with a view of overcoming these obstacles, are as follows:—

1st. The matter to be examined, after cautious evaporation to dryness, is mixed with nitrate of potash in excess, and the whole heated until deflagration occurs; in this manner the organic principles are destroyed, and the arsenic left in the state of arseniate of

potash, mixed with a large quantity of other salts, from which it is easily separated.

This process would no doubt answer when the amount of arsenic was considerable, but in other cases it could hardly be trusted from the great danger of some of the arsenic escaping the oxidizing action of the nitre, and getting volatilized.

2nd. Precipitation by sulphuretted hydrogen. The great difficulty in this is, as already mentioned, to get such a solution as shall allow a precipitate to subside in a state fit for reduction afterwards. Dr. Christison recommends treating the complicated mixture, after boiling it with distilled water, and straining the solution from the solid portions, with a little caustic potash or acetic acid, or both in succession, until the liquid becomes capable of passing a paper filter. This part of the operation is, however, excessively tedious, the pores of the paper get speedily stopped, and it often happens that two or even three days elapse before a sufficient quantity of clear solution has been collected beneath to admit of the completion of the experiment.

The plan to be mentioned presently, is merely a modification of Dr. Christison's process, by which this delay and inconvenience are got rid of, and the time required very much shortened—a point in many cases of great importance.

3d. Marsh's test.—This most ingenious method of detecting minute traces of arsenic has been lately so much brought into public notice, that a few words only concerning it will suffice. It reposes on the fact that when hydrogen is disengaged in contact with arsenic in an oxidized state, the oxide is immediately reduced, and at the same moment the liberated arsenic dissolved by another portion of the gas, giving rise to arseniuretted hydrogen. The practical part of the operation is very simple; the organic mixture suspected to contain arsenic, either with or without previous treatment for the removal of some of the adventitious matter, is acidulated with sulphuric acid, and introduced into the now familiar apparatus contrived for the purpose, and in which is contained some metallic zinc. The disengaged gas collects in the vessel appropriated to it, and is there burned at a small jet and the products examined.

Now we have ample evidence to show, that when this experiment is properly conducted, and especially when the zinc is quite free from arsenic, it affords a means of discovering the presence of that substance, which is far more rigorous than any other that has been proposed, but unfortunately its very perfection of delicacy is an argument against an indiscriminate use in the hands of all who are not thoroughly conversant with chemical research, and duly impressed in consequence with the sources of error and danger which beset all such investigations.

Those who are interested in this matter, will do well to consult the report of a French scientific commission of inquiry into the value of this method, given in the June number of the *Annales de Chimie et de Physique*—the report is extremely favourable.

A modification of this plan has lately been proposed, by which the risk of impurity in the zinc is obviated. This consists in immersing in the liquid to be examined two platinum plates, and connecting these with the extremities of a powerful voltaic battery. The hydrogen, liberated at the negative electrode, reduces and dissolves the arsenic, while the gas so produced is collected and examined as usual.

I proceed to place before the Society the description of a plan which appears to promise tolerable success in such inquiries. The following is the principle:—

When dilute sulphuric acid is boiled with the greater number of the substances used for food, and which are likely to become the objects of chemico-legal investigations, the invariable effect is the acquisition, by such substances, of a great degree of thinness and limpidity, partly by the conversion of the starch and mucilaginous matters they contain, into dextrin and sugar, and partly also by the coagulation of the albumen and casein present. This is very strikingly shown by boiling, for a few minutes, a quantity of thick gruel with a little dilute oil of vitriol; the mixture becomes quite thin, and runs through a paper filter, almost as freely as pure water, a coagulum of azotized substance being left behind. The same thing happens with milk and beer, and many other complicated liquids; they become as thin as water, and filter quite easily.

A clear solution being thus got, a stream of sulphuretted hydrogen is, when cold, passed through it, the liquid boiled for a few seconds, and then passed through a small filter, and the orpiment washed.

In this state it is seldom pure enough for advantageous reduction, even when its colour is bright; it is better to dissolve it in aqua regia, to evaporate gently to dryness, take up the residue with water, and again to precipitate with sulphuretted hydrogen, wash, dry, and reduce with black flux.

The second precipitation by sulphuretted hydrogen requires some care, as the arsenic is often not at first thrown down from being in the state of arsenic acid; it is proper, after passing the gas some time, to heat the liquid to its boiling point, suffer it to cool, send through it an additional portion of gas, and again boil; by which all the orpiment falls down at once and is easily collected on a little filter. The solution should also be acidulated with a little hydrochloric acid.

When such a substance as soup is to be examined, rich in gelatine, it is better to get rid of that body by the aid of an infusion of galls before proceeding to the treatment by sulphuric acid.

The following record of a few experiments will suffice to convey some idea of the applicability of the process to cases of real poisoning.—

Matters taken—

1st. 2,000 grain measures of thick gruel

.5 grain arsenious acid

100 grain measures oil of vitriol, diluted with some water.

The whole boiled for half-an-hour in a flask and placed upon a filter—filtration exceedingly quick. Clear liquid, treated with sulphuretted hydrogen, the sulphuret collected and examined—abundance of arsenic obtained.

2d. 2,000 grain measures of milk

.5 grain arsenious acid

100 grain measures oil of vitriol.

Experiment as successful as the last.

3d. $\frac{1}{2}$ pint of porter

.25 grain arsenious acid

250 grain measures oil of vitriol.

Boiled for half-an-hour—filtration exceedingly easy. Sulphuret treated with aqua regia, as before described, and re-precipitated, gave on reduction a brilliant ring of metal, which was oxidized to arsenious acid, dissolved in water, and examined satisfactorily by the liquid tests.

4th. $\frac{1}{2}$ pint of a mixture of sour beer and sour milk

.25 grain arsenious acid

250 grain measures oil of vitriol

Experiment as before; result excellent.

5th. $\frac{1}{2}$ pint of a mixture of solution of glue, boiled yolk of egg, coagulated milk, and some sugar.

.25 grain arsenious acid

200 grain measures of oil of vitriol, diluted.

Mixture warmed and infusion of galls added; strained through cloth. Muddy liquid, boiled with the acid fifteen minutes, and placed on a filter; solution ran through in a stream, and enough arsenic was obtained from it to apply all the tests.

6th. Soup prepared from meat, with herbs, potatoes, fish, &c., with due proportion of salt, and suffered to stand until sour and disagreeable to the smell. Half-pint taken.

.25 grain arsenious acid, dissolved in a drop of caustic potash solution, and added; mixture acidulated, mixed with infusion of galls and heated; refused to pass through cloth strainer.

250 grain measures of oil of vitriol diluted and added, and the whole boiled for ten minutes and strained through cloth. Solution again boiled for fifteen minutes, cooled to separate fat, and filtered (easily). The solution was nearly clear, and of an amber colour; by precipitation with sulphuretted hydrogen, &c., enough arsenic was obtained to furnish a brilliant ring of metal.

Materials taken—

7th. $\frac{1}{2}$ pint gruel

.25 grain arsenious acid

250 grain measures oil of vitriol.

Result very good.

8th. A piece of the stomach of a lamb, weighing about one quarter of a pound taken; .5 grain arsenious acid strewed over inner portion and well rubbed in; cut in pieces and boiled in water with some caustic potash until nearly dissolved, which occupied about two hours. Liquid acidulated, mixed with infusion of galls, and evaporated rapidly down to small bulk. When cold, strained through cloth, and the muddy solution boiled for fifteen minutes with 150 grain measures of oil of vitriol diluted, filtered, and treated as usual; thick brilliant ring of metallic arsenic produced. The limit of delicacy not yet reached.

It may be proper to remark, that the above are all the experiments that were made, not a single instance of failure having occurred.

The same process may, it is not unlikely, be also successful when mercury is sought for by the aid of protochloride of tin, and perhaps in other cases. It may be objected that there is a chance of adding in the sulphuric acid the very body we are seeking; but I do not believe that good oil of vitriol made for sale often contains arsenic. It is, of course necessary to examine the acid before employing it for such a purpose. If oil of vitriol be still objected to, perhaps crystallized oxalic acid would answer the same purpose, as that substance possesses, to a very great extent, the power of converting starch into sugar.—*Pharma. Transactions.*

MEETINGS FOR THE ENSUING WEEK.

- MON. Medical Society of London, 8 p.m.
— Geographical Society, half-past 8 p.m.
TUES. Royal College of Surgeons, lecture, 4 p.m.
— Royal Medical and Chirurgical Society, 8 p.m.
— Zoological Society, half-past 8 p.m.
WED. Royal Medical Botanical Society, half-past 8 p.m.
THU. Royal College of Surgeons, lecture, 4 p.m.
— Royal Society, half-past 8 p.m.
FRID. Royal Institution, half-past 8 p.m.
— Botanical Society, 8 p.m.
— University College Medical Society, 8 p.m.
SAT. Royal College of Surgeons, lecture, 4 p.m.
— Westminster Medical Society, 8 p.m.

ERRATA.—We are requested to state, that Dr. Dawson's operation in a case of hare-lip, was performed on a child four *days* old, not four *years*; and that Mr. Roberson, not Robertson, was the gentleman referred to by Mr. Kirkby, in the article on *Menstruation*.

MEDICAL MEMS. OF THE WEEK. BY PERISCOPICUS.

GALL BLADDER.—Dr. Fletcher recently submitted to the Pathological Society of Birmingham a ruptured gall-bladder, taken from a patient, who, after fighting, had been taken suddenly ill, and peritonitis supervening had died the second day. Mr. Hodgson attributed the rupture to the unhealthy state of the bladder; and said, that in a similar case a judicial inquiry was stopped on its being found by experiment that the gall-bladders of sheep would not burst when struck with great force by a butcher's cleaver as they lay on a block attached to the liver and intestines. In both cases of ruptured gall-bladder, the deceased (we should mention) showed no marks of external violence in any part of the region of the gall-bladder.

ARTIFICIAL ANUS.—Thirty-five operations for artificial anus are recorded in the French Medical Annals, from 1776 up to the present time. Out of these sixteen of the patients died within a month or less of the operation; two died within five months; four are now living; and the rest were living at periods more than six months from the operation. Callison's operation, modified by Amussat, was the most successful. Of six patients thus operated on by the latter, one died ten days after, one survived five months, and four are now living.

CHALK-STONES.—Mr. Babington, in removing a chalk-stone from a man's finger, was asked if there was any particular tendency in these cases to the formation of vesical calculi. He replied there was, and that when the deposition in the joint ceased, calculi would sometimes form. It appears, he said, that this diathesis is vicarious, sometimes affecting joints and producing chalk-stones, at others urinary calculi; at others it will affect the stomach, causing acidity; and again, the skin, producing cutaneous eruptions, and that when one of the actions is set up, the same going on elsewhere will often cease.

ANGINA PECTORIS.—Sir B. Brodie was asked, "What is the effect of ossified coronary arteries?" The reply was, "Angina Pectoris." These arteries (said Sir B. Brodie) carry sufficient blood for the proper action of the heart, so long as the person is at rest and free from excitement; but excite him in any way, put him in a passion, and you increase the heart's action; this increased action requires an increased flow of blood, but the condition of the arteries will not admit of it, and an attack of angina pectoris is the consequence. I knew a case of a lady (continued Sir B. Brodie) who had ossification of the arteries of the anterior tibial region; you could feel it with your finger. This lady suffered no inconvenience while at rest, but if she exerted herself much, the muscles of the leg lost their power. Here then was sufficient supply of blood for the muscles in their ordinary state, but if they were put into more active exertion, the arteries did not supply sufficient, and a sort of paralysis was the consequence.

EXHAUSTION.—Mr. Toogood, of Bridgwater, furnishes us with a case of extreme and protracted exhaustion, for which he can allege no sufficient cause. "A lady who had been confined about four months, and partially suckled her child in one breast only, was apparently in good health, until she heard some distressing news which agitated her a good deal. Her menstruation had returned in the usual way a fortnight before this event, since which she had occasionally been subject to slight discharge. A day or two after this fright she was seized with coldness, trembling, and slight faintness, which were soon removed by a cordial. Ten days after this she

was attacked with pain in the bowels after an evacuation, and faintness, which continued long enough to excite some apprehension in the minds of her friends. She remained in a faintish state from two o'clock in the morning until seven in the evening, when I saw her, in consultation with her usual medical attendant. I found her lying on her back with a blanched countenance, and a surface of death-like coldness, without any pulse at the wrist. There was sickness, with occasional attempts to vomit, and pain in the forehead, which was kept constantly wetted at her request. I learned that, notwithstanding cordials had been administered, very little effect was produced by them, and that she constantly relapsed into the same state; I got down a good quantity of hot brandy and water, after which a feeble pulsation was felt at the wrist for a few moments, and although brandy, opium, ammonia, and every other restorative which could be given, were freely and unremittingly administered, her state became more alarming. If the pulse was perceptible after a large dose of brandy and opium, it sunk again immediately, the faintness increased, she constantly called for the smelling-bottle and fan, and became so restless that it was scarcely possible to keep her still; the surface was bedewed with a clammy sweat, the respiration was short and cold, and she either refused to swallow anything, or instantly made an effort to reject it. Notwithstanding the extreme coldness of the surface, she objected to all external heat, which seemed to increase her faintness. She remained in this alarming state until two o'clock the following morning, after which time she became more tranquil, took nourishment, and retained it. During the next twelve hours she gradually but very slowly recovered some heat and steadiness of pulse, but was not able to be moved or undressed until thirty-four hours after the attack."

SYPHILITIC MUSCULAR CONTRACTION.—This rare affection attacks the flexor muscles of the fore-arm. In three cases in patients labouring under some tertiary syphilitic affection, the muscles of the fore-arm were permanently retracted, hard, and stiff, but did not appear to have undergone any change of tissue. There was a peculiar pain in the contracted limb; this pain was chiefly felt at night, and resembled exactly the pains in the bones which occur during syphilis. In one patient the retraction coincided with tertiary ulcers of the throat, and in another with nodes on the tibia. The patients were treated with the ioduret of potassium, and soon recovered.

METRRORRHAGIA.—M. Dumars has published observations on the extreme utility of tannin in cases of uterine hæmorrhage. He employs the tannin in the form of pills, mixture, and injection; but the following is the one which he prefers:—Tannin, thirty-six grains; extract of opium, one grain; conserve of roses, enough to make twenty pills. Of these one is given every hour, until some impression is made on the hæmorrhage.

CATHETERS.—Sir B. Brodie, in one of his lectures on the urethra, related the following interesting case, at the same time offering some remarks:—A man was admitted into the hospital with retention of urine; he had stricture, and some one in attempting to pass the catheter out of the hospital had lacerated the urethra anterior to the stricture, and made false passages. The house-surgeon, on his admission, gave him a full dose of opium, and succeeded in getting a silver catheter into the bladder, and left it there. Sir B. Brodie asked why a *silver* catheter had been used, and not a gum-elastic one? The house-surgeon had been unable to pass one of that kind. Sir B. ordered the silver one to be withdrawn after it had been in about fifteen hours, observing,

that he had an objection to leaving silver catheters in the bladder, as injury frequently resulted from them, from patients running incautiously against the bed whilst an elastic one would yield under such circumstances. When the old flexible pewter catheters were used, they not unfrequently were broken in the bladder; but with this man's urethra as lacerated. Now it very seldom happens that any injury results from the bladder being lacerated in attempting to get an instrument through the stricture; and for this reason, the laceration takes place anterior to the stricture, and therefore the power of the bladder is not exerted in forcing the urine into the false passages, but through the stricture, and after it has done this, the urine more readily passes along the canal of the urethra than into the false passages; then also, the openings are generally valvular, and this serves as a protection. Sir B. Brodie himself, in one case, passed a small catheter into the rectum, but no ill effects followed.

FISTULA IN ANO.—Dr. Burne strongly recommends, previous to the operation for fistula in ano, a course of saline aperients to diminish determination to the pelvic viscera, and thus to obviate the obstinate hæmorrhage which occasionally attends this operation.

OPHTHALMIA.—Mr. Cutler recommends the following plan of treatment in strumous ophthalmia, one which, he says, will cure every case:—

R. Pulvis rhei., gr. iij—v;
omne nocte.

R. Acidi. sulph. dil. m. v—viij;
ter die;

the diet to consist chiefly of animal food.

CHRONIC GLANDULAR ENLARGEMENTS.—Dr. Chambers has seen great benefit from, and particularly recommends the continued application of emplastrum Galbanum Comp. in the above cases.

HÆMORRHAGE.—Dr. Burne says, "hæmorrhage from the kidneys is distinguished by the fibrin of the blood having collected into shreds, assuming more or less the mould of the ureters; that hæmorrhage from the bladder is made out by the blood being equally diffused through the urine." Whereas Mr. Babington, on remarking as to the mode of determining, says, that that from the kidneys is equally diffused through the urine, whilst hæmorrhage from the bladder often assumes more of a coffee-ground appearance, from its escaping into the empty bladder, and being afterwards digested by the urine.

HERNIA.—Mr. Guthrie says he would rather operate on six cases of the more usual forms of hernia than on one of umbilical, for there is a remarkable mortality attending the latter operation, for which he is unable to give any reason.

EPILEPSY.—Dr. Macleod, in giving nitrate of silver in epilepsy, goes on increasing the dose until it purges; sometimes a scruple will do this, at another time much less will suffice. He never gave it longer than a month or six weeks, and he never had a patient blackened by it.

GLANDS.—Mr. Hancock has seen cases of enlarged popliteal glands mistaken for aneurism. You may discover the deception by drawing the glands to one side, when the impulse of the artery may be felt separately, low down in the space; besides, none of that wizzing sound heard in aneurism can be detected in this case.

LUNG WOUNDS.—Mr. Ruddock, of Bristol, recently succeeded in curing a man who had received a stab with a long knife between the seventh and eighth ribs, about four inches below and in a direct line from the axilla, and which had penetrated both lungs. Excessive, frequently-renewed venesection, which a very strong constitution allowed to be carried to an unusually great extent, was the medium of cure.

FISSURES.—Dr. Copland recommends the following ointment for fissures about the anus:—

R. Hydrarg. Nit. Oxyd., 3j.
Adipis. 3iij.

M. ft. unguent. sæpe utend.

BRONCHOCELE.—A useful topical application for bronchocele is the unguentum iodine, comp., or the tinct. iodine comp. applied externally. It is rendered more efficacious by combining it with an equal weight of mercurial ointment.

PURPURA.—Mr. Bulley, of Reading, remarks, that in a case of purpura, with destructive disease of the ankle-joint, which ended in death, the heart on autopsy was found to be unusually small, and says—"The feebleness of the circulation, the pale and cachectic appearance, the excitability or depression of the general nervous energy, the disposition to diseases of the joints and the denser structures of the body, from the want of sufficient power in the heart, from its small size, to propel its blood into the intimate capillary system of these tissues, by which their healthy innervation is disturbed, and they are rendered more liable to morbid change—lead me to think that many of the signs and appearances of scrofulous and other diseases of diminished vitality, are frequently dependent upon this abnormal condition. From what this arrest of development primarily results it is difficult exactly to say, since the other organs of the body are often in such cases fully formed, and capable, considering the error in the circulating centre, of performing their functions comparatively well. It has struck me that it may take place in this way. A child may be born of unhealthy or half-starved parents—born, as it were, with its blood vitiated on its very entrance into life; subsequent imperfect nourishment from the mother in infancy, and afterwards in early youth, may keep up this impoverished condition of the blood for many years. I assume that in such a case the circulating fluid, thus altered in its chemical and vital properties, is incapable of healthily stimulating the nervous and muscular systems, and that thus the heart, not being roused to proper continuous action by the stimulus of the blood, like other muscles not duly exercised, ceases to enlarge, and thus its development becomes prematurely and permanently arrested."

TUMOUR.—Mr. Rowe, of Woburn Place, mentions a case of enlargement of the abdomen, supposed to arise from diseased spleen, but which on autopsy proved to be a tumour, weighing fifteen pounds and a half, resting on the intestines, and unconnected with any particular organ.

CHLOROSIS.—M. Chomel attributes extraordinary efficacy to the administration of iron in this malady. He cures very obstinate cases in fourteen or fifteen days, and rarely finds an instance where this treatment, aided by proper diet and exercise, does not succeed within a month. He prefers the steel-filings to any other form.

AN OLD WOMAN'S REMEDY.—Dr. V. Pettigrew, on Mr. H. J. Johnson narrating cases of inflammation and wasting of the deltoid muscle in which no treatment of him or his friends in the slightest degree availed, mentioned two cases which he had cured by continued application of hot vinegar to the part for seventeen successive days. He added, that it was a custom at the opera, when the dancers sprained their ankles or feet, to plunge them into hot vinegar, which gave immediate relief.

ATROPHY.—Dr. Charles Clay, of Manchester, maintains that the doctrine of feeding atrophied patients frequently is false and mischievous, arguing that the stomach requires rest like any other organ. He considers that

atrophy more frequently than is generally suspected originates in mesenteric glandular affections, the extent of the affection always regulating the quantity of chyle poured into the blood. He condemns the too common use of tonics in such cases, and directs himself, in the first place, to the restoring the existing induration which he effects by the following specific: R. Tincture of iodine, gttss. xxx. Fowler's solution of arsenic, gttss. xxv. Infusion of Colombo or gentian, 3vi. Let one-sixth be taken three times a day, to be continued with steadiness. The arsenic, however, if it cause pain in the head may be omitted occasionally for two or three days. He assists the iodine mixture by administering calomel in small doses every hour, so as to touch the gums speedily: with these mild tonics, avoidance of stimulants, gentle exercise, and care against colds, complete the recovery.

DELIRIUM.—Chomel is of opinion that for one case in which delirium arises from idiopathic disease of the brain, there are twenty in which it depends on sympathy of the brain with disease of the body.

PARALYSIS OF THE PORTIO DURA.—Dr. V. Pettigrew says, that cases of this character depend either on cold or pressure, or the predominance of acidity in the stomach. The muscular action, he added, quickened the arterial action, impeded the nervous power, and gave fulness and rapidity to the circulation in the cutaneous veins; for these latter, according to Mr. Wardrop, were the safeguards of the lungs.

CANCER OF THE LUNG.—A woman, aged 40, labouring under a well-developed case of cancer in the lung, a form of lung disease which Laennec says he never noticed, and which is not referred to by any known medical writers, recently died at the University Hospital, under the care of Dr. Taylor. The cancer would doubtless have been confounded with tubercle, had not peculiar circumstances led to an extremely close scrutiny. The distinction was only marked by the surface of the matter infiltrated through the tissue of the lung, having in various places a pink hue, and being vascular, a distinction shown to be more decided on microscopic examination. The heart was somewhat atrophied, a circumstance supporting the remark of Louis, that the hearts of persons dying of cancer are smaller than those of persons dying of any other malady.

AMYGDALITIS.—In a severe case of this kind M. Chomel remarked, that when any organ is frequently the seat of inflammation, the first attack is the most violent; the subsequent in succession the most durable. M. Chomel prefers purgatives to the other remedies for the acute inflammation. Where there is chronic swelling of the tonsils, he has little confidence in borax, alum, and the other astringents; and is of opinion that the excision, which he has frequently tried, is, though often the best, still an uncertain remedy, which ought not to be used when the patient is young, for he has known time and increased strength often cure the most unpromising cases.

FUNGUS HÆMATODES.—Dr. Benson laid before the Surgical Society of Ireland, a specimen of *encephaloid* or *cerebriform* disease, which occupied a large portion—one-half at least—of one lung. He never saw a more perfect imitation of brain-like matter than it exhibited, so that if it were detached from its situation, he thought it might be mistaken for a part of the brain itself. It was remarkable also as having occurred in a man rather advanced in life—nearly sixty years of age; and for another circumstance, namely, that in the top of the same lung there were several tubercles in their several stages of development and

decay; and there was, moreover, a portion of the lung, its lower and back part, quite healthy. Percussion gave every where an unusually clear sound, in fact equal to what is elicited in cases of well-marked emphysema. The stethoscope being applied, a crepitating râle was audible in every point of the chest; it was of a very fine character, and conveyed strongly to the ear the idea of hardness; it was only heard at the end of inspiration, which was strongly puerile; there was no bronchial or tubular respiration to be heard, and but a mere trace of bronchitic râles.

MEDICAL NEWS.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A half-yearly general court of the members of this Society was held on Wednesday, at the Gray's Inn Coffee-House, Sir Charles M. Clarke, Bart. vice-president, in the chair. It appeared from the auditor's report, that the sum of £632 had been granted for the past half-year to thirty-one widows and fourteen children of deceased members; and that £100 had been funded. Certain resolutions of former courts, regulating the amount of subscriptions by the age of members, were finally confirmed; and other resolutions for the registration of the Society, agreeably to the provisions of the Acts of Parliament for regulating Friendly Societies, were, after some discussion, carried unanimously. By this proceeding the Society will obtain the privilege of arbitration in case of dispute, and of investing its funds, upwards of £42,000 stock, with the Commissioners for the redemption of the National Debt. We beg to call attention to the advertisement of the Annual Dinner of this Society to take place on Saturday, the 9th of April. His Royal Highness the Duke of Cambridge in the chair.

Dr. Bowring has succeeded in making the absurd Quarantine Laws the subject of further government investigation. We are glad of this step being gained, for knowledge is really all that is wanted to secure them a thorough revision.

ROYAL COLLEGE OF SURGEONS, LONDON.

List of Gentlemen admitted members, on Friday, April 1st, 1842:—

Joseph Thomas Fletcher, Arthur Gillot, Michael Allen Janc, Francis Southam, William Row, William Mitchellmore, John Pegge, William Pocock, Michael Hudson, Peter Montague Pope, Jas. Dunn, Arthur Jas. Cumming.

ADVERTISEMENTS.

TO THE MEDICAL PROFESSION.—In addition to the numerous Testimonials which Mr. Dinneford has had the satisfaction of submitting to the Medical Profession of the efficacy and superiority of the SOLUT. MAGNES. BICARB., as compared with other alkalies, he has great pleasure in adding the following, which cannot fail to be useful to all engaged in general practice, as it presents another strong evidence of its remedial power resulting from practical experience.

Copy of a letter from Dr. James B. Thompson, Surgeon-Accoucheur:—

33, Upper Gower-street, University College.

Sir,—In justice to you, I feel called upon to add my testimony to your preparation of Magnesia, which is, in my opinion, an invaluable acquisition to the profession generally, particularly in cases of gastric derangement, and in catarrh of the bladder and irritable urethra. I have very recently tried it with the most beneficial results in two cases of irritability of the bladder and urethra; I steeped the leaves of buchu and uva ursi in the solution, and found it have a most soothing effect on the parts, arising, as I imagined, from the superior powers of the solution in extracting the medicinal virtues of the leaves, and also of the advantages of the alkali which your Solution of Bi-Carbonate of Magnesia certainly possesses over that of every other preparation. Yours, &c. &c.

JAMES B. THOMPSON.

To Mr. C. Dinneford, 172, Bond-street.

Prepared of the utmost purity, and sold in Jars [for Dispensing only], containing 5 lbs., at 5s. 6d. each, by the usual respectable Wholesale Houses, or direct from the Proprietor.

Dinneford, Family Chemist to Her Majesty the Queen Dowager, 172, Bond-street.

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CLINICAL LECTURES ON DISEASES OF WOMEN.

Delivered in the Hospital of La Charité, by Professor VELPEAU.

LECTURE X.—INCOMPLETE INVERSION OF THE UTERUS.

20. *Excision.*—By excision we more rapidly get rid of the diseased organ, but this operation may give rise to destructive hæmorrhage. From the peritoneum being opened, there is greater reason to fear inflammation of this membrane than in the preceding operation. The blood also being retained in the vagina, may re-enter the abdomen, and in the same way the intestines may protrude themselves into the vagina. Some unfortunate instances of this nature have occurred in the practice of the most celebrated surgeons.

M. Langenbeck having to operate upon a patient labouring under incomplete inversion of the womb with scirrhus degeneration of the organ, undertook the task of carefully dissecting, from without inwards, the peritoneum from the surface of the uterus, so that after the removal of this organ the membrane should remain perfectly sound. This patient was completely cured. It is true that the passage of the air into the abdomen by the vagina, which is considered possible even after the cure by Rousset and Siebold, the latter of whom ascribes the death of a patient to this cause, would by this means be surely guarded against. But we have hitherto met with nothing but simple assertions on this head, which, besides, are not difficult of refutation; and were it necessary to follow the proceeding of Langenbeck, excision would become one of the most difficult as well as tedious of operations. I do not hesitate to say, for my part, that I cannot see the advantages of imitating the conduct of this surgeon. In combining ligature and excision, as I shall presently show, we attain the desired end with equal certainty and with greater facility. Pure and simple excision of the inverted portion of the uterus is a very dangerous operation. But it would be going too far to regard it as constantly mortal, or to proscriber it in an absolute manner. A patient on whom I performed this operation in 1836, became perfectly cured. The following is the history of the case:—

A lady, living at Chateauroux, 24 years of age, was confined about three years since, and had from that time been constantly labouring under uterine hæmorrhage, sometimes in small and sometimes in large quantities. Some surgeons whom she consulted in the country pronounced her to be labouring under inversion of the uterus, while others considered it to be polypus. Coming to Paris in July, 1836, this lady consulted various practitioners, all of whom adopted the latter opinion. The extirpation was resolved on, when I was requested to see her. Entertaining some doubts as to its nature, I made a second examination of the tumour, which was of the size of an egg, and from its density and elasticity appeared like a fibrous body concealed within the vagina.

Having placed one hand upon the hypogastrium, and the index-finger of the other as high as possible within the rectum, I ascertained that there existed merely a void in the place usually occupied by the womb, and consequently pronounced it a case of uterine inversion instead of polypus. Having been desired to operate, I seized the tumour with a forceps which I intrusted to M. Revallé, who acted as my assistant, and passing two fingers of the left-hand forwards to serve as a guide to a long curved knife, I divided, layer by layer, the whole of the constricted part of the organ, so as to leave merely the portion above the uterine neck. The finger, when passed through the wound, entered freely into the cavity of the peritoneum, and distinctly recognised the intestines. I could then easily perceive that the whole body of the uterus had been removed, no doubt of which can be entertained on an examination of the excised organ, which I have preserved. The hæmorrhage was slight, but excruciating pains, cramps, extreme agitation, and syncope soon supervened, and continued with such intensity for three days, that we entirely despaired of the patient. Preparations of opium, administered internally and externally, frictions with mercurial ointment on the hypogastric region, Seltzer water, &c., eventually relieved these symptoms, and at the end of a month the cure was complete.

Whatever confidence a case of this kind might inspire, I do not think that, in the present state of science, and after a mature consideration of the cases which have been published, we should confine ourselves to excising the inverted portion of the womb, without previously placing a ligature above the point where excision is performed. I should certainly advise the combined use of these two operations, when a decisive course is requisite. It was in this manner that I operated on the woman last week, the principal details of whose case I will shortly relate to you. We also see in a case transmitted to the Academy of Medicine by M. Lasserre, that this surgeon, after applying a ligature upon the womb, was compelled, on account of the alarming symptoms presented by the patient, to practise excision of the organ. This case is so interesting, that I must relate its principal features as communicated to the Academy in the report of M. Capuron, read on the 21st of July, 1835.

CASE.—“A woman, 23 years of age, had a very difficult confinement at the ordinary term with a male infant; the midwife employed violent tractions upon the umbilical cord, before the placenta had been expelled from the uterus. A frightful hæmorrhage took place. The patient was undressed, and laid naked upon the ground, while the midwife threw over her a large quantity of half-frozen water. The hæmorrhage, which had threatened to carry off the patient, was checked, but it re-occurred at various intervals, especially at the return of the menstrual period, when it again placed the life of the patient in danger. A medical man, who was called in, arrested the flow of blood at the time, but it re-appeared every month, attended by alarming symptoms. At the end of about eighteen months, the patient appeared to be regaining some strength, when the hæmorrhage again manifested itself, and was accompanied by the same dangers. The midwife thought she perceived a *prolapsus* of the womb, and applied a pessary; still the symptoms not becoming ameliorated, M. Lasserre was consulted, who immediately discovered in the vagina a pyriform tumour, the pedicle of which was surrounded by a kind of collar at the point corresponding to the uterine orifice. He diagnosticated inversion of the uterus, and thus discovered the source of the floodings. As it was impossible to reduce the organ, and foreseeing that renewed attacks of the hæmorrhage would indisputably carry off the

patient, he resolved on immediately extirpating the uterus as the only means of saving her life. Having therefore placed the woman on the edge of the bed, he tied a ligature around the pedicle of the tumour, as near as possible to the uterine orifice. Acute pains were caused by this operation, but were quieted by laudanum. This pain was reproduced several times, and alleviated by the same means. After some time, thinking it necessary to again tighten the ligature, a pain was produced in the hypogastrium of so intense a character as not to yield to laudanum, and he was therefore obliged to loosen the ligature. This circumstance occurred each time that he attempted to produce a greater degree of constriction. In the course of a few days, fearing the supervention of abdominal symptoms, M. Lasserre determined on bringing the operation to a conclusion. He drew the tumour outwards, and discovered that a part only of the pedicle had been destroyed by the ligature. He placed another ligature around the non-destroyed portion for fear of hæmorrhage, and removed the tumour with the stroke of a knife. Shortly after the operation, symptoms arose which led him to fear *peritonitis*, but they were reduced by means of an antiphlogistic and soothing treatment. At the end of five days the patient was in a satisfactory condition. Some days afterwards, swelling took place in the left leg and thigh. This subsided, and thirty days after the application of the ligature the cure was complete. A year had elapsed from the period of the operation, when M. Lasserre communicated this case to the Academy, and menstruation had not since taken place. Since her recovery, this woman has been able to have connection with her husband as before the operation, and experienced the same voluptuous sensations.”

M. Capuron considered the description of the tumour by M. Lasserre as not sufficiently explicit, and also the distinctive signs of uterine polypus and of inversion of the womb as not clearly detailed; but the whole bearing of the case can scarcely leave a doubt as to M. Lasserre having really extirpated the womb in this instance, especially as he was able to verify his diagnosis after the operation. I have now merely to present to you the detailed history of our patient, who died a day or two back. I will explain to you the mode of operation which I adopted, and the modifications which I propose, should another case of this kind come under my care. These modifications have suggested themselves to me from the examination of the state of the parts after death.

CASE.—*Incomplete inversion of the uterus, of eight months' standing—Extirpation—Death—Autopsy.*—Albertine Holbe, 26 years of age, was admitted on the 1st of June, 1840, in St. Catherine's ward. This woman, who had always enjoyed good health, and possessed a strong constitution, was put to bed with her first child about eight months back. Nothing particular, according to the patient, occurred during the accouchement; no assistance was required on the part of the attendant. But after the placenta had come away, the midwife perceived in the vagina a large tumour, which at first led her to think that there was a second child; but after a careful examination, she asserted that she had discovered the nature of the affection, and assured the patient that there was no danger. She then, without difficulty, re-introduced the tumour, but some days afterwards the disease again appeared. A physician was immediately consulted. After an attentive examination, he discovered the uterus to be inverted. Attempts at its reduction were made, but without effect. A palliative treatment was adopted, and the patient submitted to a suitable regimen. But she was so exhausted from abundant and frequent hæmorrhages, that lively fears

were excited for her condition, and she became convinced, from the report of her physician, that an operation alone could free her from her complaint. Holbe came to Paris, resolved to try all the resources of art, and was admitted into this hospital.

The following was the state of the patient on our first visit:—I should say first of all, that, in the night, she had had a copious flooding. The appearance alone of this woman clearly indicated her state. Her face was very pale, but not so greatly reduced; her lips were perfectly colourless; her flesh soft and flabby; she complained of extreme feebleness, which might be readily seen from the difficulty she experienced in raising her arms; she lay almost motionless in bed. Her pulse was very weak, scarcely perceptible. She experienced no decided or constant pain, but at intervals she complained of a dragging sensation at the upper part of the vagina. To give an idea of her state, she said that she was *dying*. On making an examination by the vagina, I discovered at the upper part of this canal a pyriform tumour of the size of a hen's egg; it was firm, reddish, and elastic; its pedicle was evidently prolonged beyond the neck of the uterus, which, forming a firm band around this part of the tumour, produced so great a constriction, that the finger could not be passed further upwards. A few drops of blood exuded from its surface. The previous history of the disease, as well as the local signs which I have just described, left scarcely any doubt as to the nature of the disease. Still, to remove all obscurity, I applied my left-hand upon the hypogastric region, and introduced the index-finger of the right as high as possible into the rectum, then performing the manœuvres of which I have previously spoken, I was readily convinced of the absence of the tumour formed by the womb in the natural state, thus proving the existence of incomplete inversion of the uterus. This diagnosis once established, it merely remained to decide on the course of treatment to be adopted. I all along declared to you that this was an exceedingly dangerous affection. In fact, by abandoning the disease to itself, it was evident that we should be leaving the unfortunate patient to a certain and not distant death, for it was impossible that she could support another loss of blood, however small. On the other hand, an operation in this case presented such a long and fearful array of dangers, that it was necessary to reflect twice before resolving on it; still, as I have told you before, it did not follow that it must be mortal. There are in these cases, as you must be well aware, circumstances of the most delicate nature which place the surgeon in a truly perplexing position. On the one hand, a perfectly hopeless condition, which permits us to count on a very short existence only; on the other, an operation which, though not necessarily fatal, is still one of the greatest danger. But a choice must be made, and in our patient there was no time to lose; a flooding had lately taken place, and she was but eight days from her menstrual period. This last circumstance, by exciting apprehensions of a new cause of hæmorrhage, which, however, might happen every instant without it, still further pointed out the necessity of adopting a most decided course. Seeing that the patient was perfectly aware of her condition, and was convinced that no other course was left, I resolved on performing the operation on the 6th of June, at 10 o'clock in the morning. The following questions then presented themselves:—Should I in this case confine myself to placing a simple ligature around the tumour? Should I practise pure and simple excision, as in the young lady of Châteauroux, whose case I have spoken of above? or else, should I have recourse to the two operations combined? I immediately rejected the idea of the ligature alone; I have already told you my reasons. As to extirpation without a previous ligature, although I had in one case succeeded in a remarkable manner from its adoption, I did not think myself justified in attempting it again with this patient. The third course appeared to me the most sure and rational; I therefore adopted this operation, which I should advise you to make use of under similar circumstances.

The patient was placed upon a bed, in the position which I have before pointed out to you for operations on this part. An assistant, placed on either side, drew apart the *labia majora*; I then introduced the index-finger of the left-hand towards the upper part of the *vulvo-uterine* canal to serve as a guide in seizing the tumour with a pair of forceps. This instrument, when firmly fixed upon the womb, enabled me, by slight tractions, to draw the inverted portion of the organ a little distance beyond the vulva; then giving the forceps to an assistant, I was easily enabled to pass a narrow ribbon through the centre of the tumour. The patient did not appear to feel this first stage of the operation, and I then withdrew the forceps. I could, strictly speaking, have applied the ligature without withdrawing this instrument, or fixing the ribbon of which I have spoken; but it is evident that I should have been much more embarrassed in my manœuvres. You will, also, understand that the forceps may slip and lacerate the tissues, whilst we have no such inconvenience to fear with a ribbon passed through the centre of the tumour. I should advise you to follow a similar course in your practice. This done, a ligature (four threads thick) was carried around the pedicle of the tumour, as closely as possible to the neck of the womb. I applied the ligature in the same way as in treating a polypus, employing merely a moderate constriction. The patient, who hitherto had made no complaint, now uttered a few groans; still her face expressed no great anguish; she was quickly composed, and the ligature fixed. Taking a bistoury in the right-hand, I then rapidly excised the tumour close below the strangulated point. A small quantity of blood escaped. This division did not appear very painful; the patient groaned a little. The operation was then completed, and the patient carried to bed.

Before proceeding further, I must make a remark, which is not devoid of importance. All authors give as one of the distinctive characters between polypus and inversion of the womb, the difference of sensibility of the two tumours. But we see that in our patient this character would have furnished no indication, for she did not appear to suffer much, either from the constriction or from the excision of the tumour. This might perhaps be attributed to the weakness or great emaciation of the patient. It forms, however, a circumstance worth noticing. Immediately after the operation, Albertine complained of some slight pains; still she appeared to have regained some power, doubtless arising from the satisfaction she experienced in getting rid of her disease. I ordered her to take a little wine and water. Two hours after the operation, the pains in the abdomen had become more acute, but were not augmented by pressure; the countenance of the patient, which was somewhat animated after the operation, had re-assumed its habitual paleness, and was covered with a cold and abundant sweat; she complained of a want of air; her pulse was very small, scarcely perceptible. (Frictions on the temple with vinegar and water. A sedative draught to be given occasionally.) At eleven o'clock, this state had disappeared; the pains were less acute; pressure on the abdomen seemed to ease the patient. The pulse was improved; it had acquired more force, but was slow. At a quarter to twelve the pulse was small and irregular; the pains not more acute, but the patient was somewhat depressed; she complained of a general uneasiness; she was restless; her face pale, and her features expressive of anxiety; she suddenly experienced a desire to vomit, but seemed afraid lest the efforts should increase the pains. Shortly afterwards, however, she vomited about a glassful of a reddish liquid mixed with mucus, and the wine which had been given her after the operation. This vomiting soon ceased, and the patient immediately fell back upon her bed, saying that she was perfectly relieved, and attributing the whole of her previous uneasiness to the matter which she had ejected. Five minutes after, her features became calm; the pulse full, but not frequent. At a quarter to one, the patient remained quiet, the pulse small and regular, but devoid of frequency; the skin cool. She again felt

some nausea, and was ordered another dose of the sedative draught. At one o'clock I again saw the patient; she was composed, but requested to be moved on her side. I examined the vagina with care, but found nothing worthy of remark; not a drop of blood escaped from the vulva. I then placed the patient upon her left side. She expressed herself as feeling quite easy in this position. At half-past two, the patient continued comfortable; her features calm, the pulse full, but not very frequent (72 in the minute). The pains had almost entirely disappeared; the abdomen was soft: at two o'clock the patient took an opiate pill; at four she remained in the same condition; she was calm and tranquil, and kept constantly on her left side; her pulse was regular, rather more frequent, but full and soft. She complained of a slight pain or stitch in the left side, which spread itself towards the clavicle. At five o'clock, the pain in the chest was a little increased; the pulse the same as before; there was a slight degree of anxiety about her. (Repeat the opiate.) At six, the patient was tranquil. At seven, she wished to change her position, but hesitated from fear of the least movement renewing the pain. The pulse was a little accelerated. At eight, I returned to the hospital, and found the patient restless, and complaining of acute pains in the abdomen; the pulse was frequent and rather hard. I ordered fomentations, and the application of leeches, if the pain increased. At half-past eight, the patient wished to change her position; she desired to be moved on her back; her request was complied with, but the pains immediately became more acute, and extended over the whole abdomen, the least movement or pressure aggravating them. She now seemed depressed, the pulse was frequent, but soft; there was extreme thirst. M. Demeaux applied fomentations, and the patient took another pill. At nine o'clock, the pains continued, and seemed even to increase; the whole abdomen was painful, the pulse frequent, the skin still cool, but the thirst great. The fomentations were discontinued, and forty leeches applied over the abdomen. In half an hour's time, the patient expressed herself as somewhat relieved; the pains were less acute. The leeches did not fall off till an hour after midnight. She then requested to change her position. The abdomen was covered with a large opiate poultice, and she was placed on her left side. The pains were now slight and unsettled, but the patient was greatly depressed; the pulse small and frequent (120 in the minute); the skin cool, the thirst constant, and hicough occurred from time to time. She was easy during the remainder of the night, but could not sleep; she remained in the same position. At half-past five in the morning, the pulse was small and frequent; a few drops of perspiration rolled down her cheek. She vomited the drink which she had just taken. The abdomen was soft and rather painful. At six, she was placed in a bath; vomiting of a slight nature arose, but not to such a point as to fatigue her; she felt comfortable in the water, and remained there for half an hour. At the end of this period, she felt so faint that she was obliged to be placed immediately in bed. She again became restless; her pulse continued small and frequent, vomiting again occurred and fatigued her greatly. At my visit in the morning, I found her in the same state, and ordered her mucilaginous drinks; some Seltzer water immediately; a sedative draught every two hours, with pills containing extract of poppies in the interval; frictions on the abdomen five times a day, with an ointment consisting of four parts mercurial ointment and one of extract of opium. Towards nine o'clock, the state of the patient appeared more satisfactory. The vomitings had ceased, the features were calm, the pulse frequent, but stronger than during the night, and compressible. The remainder of the day passed over well. The patient was calm and tranquil; she slept a good part of the night. On Monday morning (8th of June), at our visit, she was in the following condition:—The face was sunken; the abdominal pains were not very acute; still she experienced at times acute prickling pains, causing her to draw up her features, or even to grind her teeth.

The pulse presented nothing particular. I ordered her to continue with her medicines as the day before, and use another bath. During the whole morning the patient appeared very depressed. Her pulse had become small; still she said that she suffered but little. At half-past twelve, M. Demeaux was about to place the patient in the bath, but he found her in a state bordering on syncope; her lips were cold, and there was constant hiccough present; she was, at her own request, placed on her right side, and the bath was delayed. In the course of a quarter of an hour, vomiting supervened. The patient complained of acute pains in the abdomen, especially in the iliac fossæ and the right lumbar region. Thirty leeches were immediately applied to the parts. A few hours after, the patient was somewhat relieved; she said that the pains were less acute. The pulse, however, remained small, hard, and frequent; there was great alteration in the features. Tuesday (9th of June), at the morning visit, the state of the patient was anything but satisfactory. This day was passed much as the preceding. But towards night the symptoms became more and more alarming, and the patient died an hour after midnight, without presenting any further sign worth notice.

The autopsy, which was made thirty-six hours after death, showed the following conditions:—The peritoneum was but partially affected, and it was only in the true pelvis that any manifest traces of inflammation were discovered. The peritoneal cavity contained inferiorly a considerable effusion of pure blood, from sixteen to twenty ounces. The remaining portion of the womb was filled with this liquid; still the divided edge of this organ was very distinct, and it was evident that a portion had slipped from beneath the ligature, and escaped into the abdomen. This fact is important, as it explains the cause of this woman's death. I should add, that from circumstances over which we had no control, we were prevented pursuing our investigations further.

I will now terminate by presenting to you a few practical remarks on this case. I need not repeat to you the motives which determined me in performing this operation; I have already explained myself on that point, and although the result has been unfortunate, I am perfectly convinced that this was the only rational course to be pursued, for the patient was evidently progressing towards a certain and not distant death. I do not hesitate to assert that, should a similar case again present itself, I would undoubtedly adopt the same operation; but, as I previously told you, with a few slight modifications. The immediate cause of the woman's death is, I believe, revealed by the result of the autopsy. The presence of peritonitis was suspected from the first, and, on the opening of the body, evident traces of inflammation were discovered in the inferior portion of the peritoneum. Some persons at once affirmed that the effusion of blood had given rise to the peritonitis, and thus caused the death of the patient. I must confess, for my part, that I do not partake of this opinion. I do not deny that the peritoneum was inflamed, the autopsy clearly proves this; but everything convinces me that this was not the direct cause of death. This cause, I believe, to have been the hæmorrhage. Remember the reduced state in which this woman was before the operation; add to this the application of nearly eighty leeches, and you can then judge whether this unfortunate patient was able to bear a further loss of about twenty ounces of blood. I know not whether I am mistaken, but it strikes me that the hæmorrhage was produced from the first day of the operation, in the following manner:—Whether from retraction of the surrounding parts, or from relaxation of the remaining portion of the womb, or again from too slight constriction of the ligature or perhaps from all these causes combined, the upper portion of the divided surface slipped from beneath too ligature, and escaped into the abdomen; hence the origin of the hæmorrhage. A point of great practical importance suggests itself from this consideration, of which I should not fail to take advantage under similar circum-

stances; namely, that in a new case of this kind, I should always combine ligature with excision, but I should tie the knot more tightly; and to guard more surely against the separation of the lips of the wound, I would place in front of the principal ligature another portion of thread, which should pass through the divided edges of the organ, and the ends of which should be fixed outside the vulva, so that the accident which occurred in this patient could not again take place.

COURSE OF LECTURES ON THE THEORY AND PRACTICE OF MEDICINE,

Delivered by C. J. B. WILLIAMS, M.D., F.R.S., Professor of the Practice of Medicine, and of Clinical Medicine, at University College.

SESSION, 1841-1842.—INTRODUCTORY LECTURE.

GENTLEMEN,—In commencing a course of lectures on the theory and practice of medicine, it will be my object to place before you in as simple and intelligible a manner as possible, the grand principles upon which you are at a future period to build, in a great measure, your general treatment. It is only for me to lay down such rules as will enable you, after coming into practice, to adapt your line of treatment to each individual case as it presents itself to your notice. It would be impossible—nay, indeed, presumptuous—in any teacher to lead you to imagine, that by your acting on the rules laid down in a lecture-room, you could thereby conduct with confidence and certainty every case coming under your care. You will yourself see the difficulty that here offers itself—no two cases are alike, nor can they with propriety be treated on the same principles, owing to the peculiarity of constitutions, the infinite variety of phases presented by disease, and a multitude of other causes. The physician must always bear in mind these considerations, and acquire in every case as much of the previous history of his patient, as he can possibly come at, for our treatment must depend, in a great measure, on a knowledge of the habits and peculiarities of our patient in each case.

It is an axiom in medicine, that correct theory or sound principles are indispensably necessary for the foundation of judicious and successful practice. Every one acquainted with the sanative art will admit the validity of this conclusion. If the practice of medicine consisted, as is very generally and erroneously supposed, in the application of a few certain unchangeable remedies for a general category of diseases, perfection in the art would be easily acquired; but the initiated have discovered, that while no other science is so important or so valuable to mankind, no other science offers such immeasurable, such untrodden tracts for exploration. It comprises almost all the branches of natural science, besides those strictly called medical, the latter of which alone offers a mass of important matter, collected, or to be collected, which few can hope to possess. The possession of the elementary principles, at least of the sciences which especially relate to our art, is justly expected and required. If you would form any notion of the extent of duties thus necessarily imposed, you have only to recollect that the history of medicine informs us that the most renowned and venerated of teachers, gifted with the most stupendous capacities, grew old in the study of our art, without having fully explored it. Hippocrates, who did more for medicine than any one of his successors, honestly declared "that he had arrived at the end of life, but not at the end of physic." The truth of his assertion is manifest; for to learn all that is known in all the branches of medical education is impossible in the very nature of things; but to become acquainted with their outlines or elements is in every man's power. Medical practitioners are therefore compelled to acquire a proper knowledge of the facts and principles on which their art is founded, so as to justify the proper authorities in placing their names amongst those who may, without injury to society, undertake the responsibility of the lives and hap-

piness of their fellow-creatures. It is to forward this laudable object, and to facilitate the progress of the student in medicine, as well as to remind the practitioner of correct principles, that council of this, and of every other medical corporate body, establish their staff of medical professors. In fulfilling the duties of the chair I occupy, and giving you a course of lectures on the theory and practice of medicine, it will be my most earnest wish to fulfil the views of the council, and facilitate your acquirement of that part of medical science, as far as my humble abilities will permit me, which has been especially confided to me. I will endeavour to be as punctual as possible, and hope you will also assist me in this respect, for irregular attendance on your part would be highly reprehensible, and equally reprehensible would it be in me if witnessing it, I were not to mark my disapproval by refusing, at the end of the session, certificates to the gentlemen in this class who are irregular in their attendance. Should it so happen that from illness or other causes, I may not be able to lecture on any particular day, I will take care that you shall not lose by my temporary absence, for I will make up for it at a future time, so that by this arrangement, those gentlemen who are so industrious in taking notes, shall not lose any remarks on the subject of the lecture so deferred.

Preparatory to entering upon the subjects about to be brought under your notice in the following course of lectures, it may not be out of place here to make a few incidental remarks.—1st. *The theory and practice of medicine* may now be defined the art of preventing and treating diseases; but formerly it was called the art of preserving health and curing diseases. The word *cure* is not used at present, because we possess no remedy capable of effecting an immediate cure. There is a great difference between treatment and cure, as many diseases are incurable, but still are proper subjects for treatment. The institutes or principles of medicine are divided into three branches:—

The *first* treats of life and health. The *second* embraces the general doctrine of diseases. The *third* comprises the general doctrine relative to the means of preventing and treating diseases. These three divisions are included in physiology, pathology, and therapeutics.

PHYSIOLOGY may be denominated the science of the functions or actions, or uses performed by the organs in the living body—such as the circulation of the blood, sensation, digestion, respiration, vision, audition, gustation, olfaction, &c. What can be more interesting to our study and reflection than those functions, and more especially the intimate connection between the intelligent principle and substance purely material, or, in other words, between mind and matter.

Pathology is the science of the nature of the diseases or disorders of functions.

Therapeutics is the science of preventing or treating disorders and diseases with a view to establish the primary or original healthy action or function of the part diseased.

Etiology, or causes of diseases.

These are divided into *internal* and *external causes*, according as they exist in the body itself, or originate from the innumerable agents that surround it. The causes of disease are subdivided into the *remote* and *proximate*, and into the *exciting* or *occasional* and *predisposing*.

The term *remote* is applied when there is an interval between the time of their application and that at which the disease presents itself: thus exposure to cold may produce *pneumonia* or *fever*, at a longer or shorter interval; and cold in this instance is called the *remote* cause of the disease. The term *occasional* or *exciting* is applied to cases in which a morbid state is induced. The ingestion of improper aliment will excite nausea or vomiting; but the cause, though exciting, is remote, when compared to the proximate, or that which induces the condition of the stomach during vomiting. The *proximate* cause is intended to mean the exact condition of an organ when its function or structure is diseased; or, in other words, it is the disease itself. Many eminent men

among the practitioners of the present day object to the term proximate, while many others adopt it. The predisposing cause is a certain condition of the body, which renders it liable to be affected by remote or occasional causes. For example, an individual may at one time be exposed to the influence of cold without any injurious effect—but at another time it will induce fever or inflammation. Then it is very evident that the cause being the same on both occasions, there must be something peculiar in the body, that exposed it to be affected at one time and not at another. This state is called predisposition, without whose existence in many cases, the causes of diseases do not operate. But violent causes may act without this predisposition.

The application of intense heat will cause a burn without predisposition, but the effects of the injury will be very considerably modified by the state of health of the sufferer. A man whose health is injured is much more predisposed to diseases of various kinds, than one whose health is good.

Some damp situations dispose to scrofula. It seems to be peculiar to cold and variable climates; it is mostly the effect of an hereditary predisposition, and is excited by crude indigestible food, bad water, living in damp low situations, and debility however induced. Internal inflammations are most dangerous to persons of a sanguine temperament and of high complexion. The diseases of the brain and its appendages are most dangerous to persons of the nervous temperament. Inflammations of the digestive and other abdominal organs the most formidable to those of the bilious temperament. Scrofula, scurvy, and all diseases of debility, are most dangerous to those of the lymphatic temperament. Diathesis means predisposition. Idiosyncrasies, or peculiar dispositions of individuals to disease, often obscure our diagnosis, prognosis, and treatment. A correct diagnosis is the most important point of pathology; for without knowing the nature of the disease, the treatment cannot be determined. The first question to be answered in all cases, is, which is the organ affected, and, is the disease functional or structural, or a complication of both? In learning the history of every case, we are in general able to determine the organ affected, and whether the disease is functional, structural, or complicated.

It is of the utmost importance to form a correct opinion, as the treatment necessary for functional and structural diseases is nearly diametrically opposite, and if erroneously employed must be productive of great injury and even fatal consequences. In every case it would be well to pursue somewhat the following plan in taking the history of the disease. *First*, we should consider the age, sex, residence, occupation, habit of body, temperament, state of general health, previous history, and present symptoms. *Secondly*, we should inquire and examine into the functions of the nervous, circulatory, respiratory, digestive, and genito-urinary systems. *Thirdly*, we should notice the countenance, eyes, tongue, respiration, pulse, condition of the appetite, regularity of the alvine evacuations, condition and colour of the feces, condition of the urine, and uterine secretion in the other sex, and not omit notice of the muscular system. Taking these hints for your guidance, which can be attended to in a very short time, by a little tact and experience, you are then enabled to form a correct opinion of the nature of the disease, and of the general issue, and thereby form a basis upon which to determine your future treatment.

Epidemic diseases differ from *endemic*, inasmuch as the former do not return at certain seasons, and spread over a larger tract of country than the other. All these may be contagious or non-contagious. The latter are communicable from one person to another, by mediate or immediate contact; the former are communicable through atmosphere, and are very generally designated infections.

Æmia or deficiency of blood is treated best by steel, where it is likely to agree with the patient, and can be judiciously administered. But, should it disagree, as it occasionally is likely to do, aperients may be advantageously combined with it. The

diet should commence with slightly nutritious substances, gradually improved and made more nutritious; fresh air, and exercise, &c., should be had recourse to; also shower baths, friction, &c.

Hyperæmia.—Too much blood will require exactly an opposite treatment to the state called *æmia*. The loss of a limb tends to *plethora*. In vomiting of blood, the best treatment is the acetate of lead, combined with opium, cold drinks, and venesection occasionally in moderate quantities, with the acid. sulph. dilut., with sulph. magnes. and the infusion of roses; this should constitute the after-treatment, with due regard to the bowels and general constitution of your patient. Pus is not all viscid. The tincture of cantharides is a most useful medicine in hydrocephalus or hemiplegia, even after an effusion of serum has taken place in the brain. It is also a useful remedy in dropsy in doses of from twenty minims to half a drachm.

This *diagram* may give you some idea of the plan I propose to adopt in the following lectures, and which we shall resume on the next evening, at the usual hour, when I trust you will all endeavour to be as *punctual* as possible; I shall feel it my duty to be here to the *minute*.

INFLAMMATORY DISEASES.

Local Inflammation.	
Elements.	Antiphlogistic Remedies.
Congestion.....	Stimulants and astringents.
Determination.....	Derivants and depletion.
Irritation of vessels {	Sedatives, derivatives, and evacuants.
of nerves. {	Narcotics, counter irritants, venesection, sedatives, and relaxants.
Fever.	
Increased action of {	Blood-letting, evacuants, relaxants, derivatives, &c.
Diminished secretions. Changes in blood. {	Alteratives, torrefacients, and discutients.
Results of Inflammation.	
Adhesion, effusion, softening, suppuration, ulceration, gangrene, induration, &c.	

In adopting this arrangement, it struck me that it would in some degree display the plan which I have hitherto observed in preceding courses of lectures in this theatre.

EXTRACT FROM FOREIGN JOURNALS.

FRENCH.

Phagedænic ulcer of the auricular region; opening of the hypertrophied lobule; restoration of the destroyed parts. By M. Petrequin, of Lyons.—CASE.—Aug. Cumini, a labourer, 39 years of age, of a lymphatic temperament and tolerable constitution, had been affected with syphilis, which had destroyed the roof of his mouth. Eight months back he first perceived behind the left ear a serofulous tumour, which, when pierced with a pin, gave issue to an ichorous discharge, and was ultimately converted into a large ulcer, attended with the destruction of the skin for some distance around. The lobule became inflamed and ulcerated so as to hang loosely upon the cheek. The disease got gradually worse, and the patient entered the hospital on the 24th of October, 1840. The whole auricular region, from the malar bone to the mastoid process, was the seat of a deep irregular ulceration, of an unhealthy appearance, and bathed with an abundant and fetid discharge. The *pinna* or outer part of the ear was greatly swelled, the lobule, almost detached, was of an unusual length, hanging on a level with the angle of the jaw, and thus giving to the ear a hideous form. Some of the cervical glands were also greatly distended, and threatened to give rise to fresh ulcerations. The general state of the patient was unsatisfactory. On account of the lymphatic and serofulous constitution, as well as the weakened condition of this man, no local application could prove efficacious without attending to the general health. The local treatment consisted at first of poultices, to allay the irritation, of frictions with ointment of hydriodate of potass, to overcome the serofulous disposition, and then of chlorine lotions, with a view of improving the

ulcer; afterwards of compresses moistened with an aromatic wine, to stimulate the process of cicatrization. The general treatment comprised a nutritious diet, pills of the ioduret of iron, sulphurous baths, &c. Under the influence of these combined means, the general health improved, as well as the local affection. The ulcer became cleansed, assumed a more healthy aspect, and gradually cicatrized. The enormous swelling of the ear disappeared, but the lobule still remained moveable and pendant. The great amelioration suggested to me the idea of a restoration of the parts. On the 20th of December, I refreshed the internal edge of the lobule, and removing a small strip from the corresponding part of the parotid region, I applied three points of suture so as to maintain the parts in contact. The first dressing was removed on the fourth day. On the 3rd of January, the cicatrix appeared firm; there merely remained a small suppurating point in the place of the original ulcer. The patient left at his own request.

Double ectropion of ten years duration in the left eye, and thirty years in the right, with partial loss of vision; operation; cure. By M. Petrequin.—CASE.—Pierre Mezard, 46 years of age, a pioneer, being exposed from his infancy to all the vicissitudes of the atmosphere, eventually contracted a catarrhal ophthalmia, under which he had laboured for several years; being compelled by the disease to quit his occupation, he consulted at Nevers several physicians, who prescribed collyria, purgatives, a seton in the neck, &c., without any good results; and his sight appeared to be completely going, when he entered the *Hotel-Dieu* of Lyons, on the 14th of June, 1840, labouring under a double ectropion. The eyelids could not be drawn over the globe; there was intolerance of light; the cornea presented large nebulous spots; the sight was confused. The globe of the eye was inflamed, but in a much less degree than the eyelid, which was red, hypertrophied, and fungous. The two lower eyelids were everted upon the cheeks, with a mucous discharge, and the formation of scabs upon their surface, the commencement of *cutisation* of the mucous membrane, accompanied with spasms of the lids, &c., giving to the countenance of the patient a hideous and repulsive appearance. A surgical operation could alone be beneficial for such a disease; but excision of the mucous membrane in this state of hypertrophy would most likely produce but an imperfect and incomplete result. I have often observed, in blenorrhagic ophthalmia, that excision of the *chemosed* part merely leaves, after the swelling has gone down, a superficial wound and a scarcely visible cicatrix. I therefore thought it better first to attack the chronic inflammation, and reduce the hypertrophy and disease of the membrane, which I was enabled to do by means of resolvent *collyria* of sulphate of copper and sulphate of alum by turns, and afterwards by dropping laudanum into the eye, and touching the conjunctiva with sulphate of copper. The action of these means was powerfully aided by applying a blister to the neck, and giving some saline purgatives. By the 10th of July, a remarkable amelioration had taken place; and the eye seemed prepared for the operation. I then everted the left eyelid, and seizing the mucous membrane with a pair of forceps, I removed, by means of a curved scissors, from one angle of the eye to the other, a narrow strip larger in the middle than at its extremities. Having allowed a little blood to escape, I bathed the eye with rose-water, and then raised up the eyelid and kept it in position by means of agglutinative bandages, with a compress. (Dieted; sedative draughts; mustard pelilu-

vium. The next day, an opening draught; application of cold water to the eye.) No inflammation took place. The dressing was renewed every second day. The eyelid kept perfectly straight and presented a striking contrast with the right eye which had not been operated upon. 26th of July, I removed a small fungous vegetation which had sprung up from the wound, and which pressed the eye-lid outwards, and then touched the surface with dried alum, (treatment continued.) 4th of August, the cure was complete; he began to use his eye. 8th, the cure being now perfect, I operated on the right eye, in the presence of Dr. Cathala; the hemorrhage was rather copious, the eye-lid was afterwards raised up and kept in its position as in the preceding operation. The treatment was in every respect similar, and the patient left at the end of a month perfectly cured.

ACADEMY OF MEDICINE.

Introduction of carbonic acid into sea-water.

—M. Pasquier addressed some remarks to the Academy upon a preparation of cold sea-water, into which he had introduced carbonic acid. In spite of the important results which have been published as to the efficacy of sea-water, the use of this liquid taken internally is not very general, whilst in the shape of baths, it has, on the contrary, acquired great popularity. This fact is principally owing to the following cause: sea-water procured near the shore becomes quickly altered by keeping. It does not bear transport. It has also an acrid and nauseous taste, which is quite repugnant to the patient. Being struck, however, with the good effects which I had seen produced by sea-water, whether as a purgative, an anthelmintic, or an alterative, I tried if it were not possible, while preserving the principal medicinal powers of the water, in the first place to digest it of those organic elements which render it so difficult to keep; secondly, to diminish the nauseous taste, which is so offensive to the patient; and lastly, to remove that sensation of weight which it conveys to the stomach, and which renders it so difficult of digestion. To obviate the first inconvenience, I followed the very simple advice given by Buchanan, I took the water a great distance from the shore, at two or three leagues, and at a depth of several feet; I then filtered it, and these simple precautions sufficed to deprive it of animal and vegetable matters, and of that oily layer which sea-water collected near the shore presents. To render it more digestible as well as agreeable to the taste, (it may here be remarked that the putrescent matters contained by sea-water near the shore, contribute greatly to the bad taste which it presents,) I charged it with four or five times its volume of carbonic acid. Thus prepared, I gave it to several patients who had previously tried to take it in the common state, and I had the satisfaction of finding that it seemed lighter as well as more agreeable, and that they no longer experienced that sensation of weight at the stomach of which they had previously complained. This preparation of sea-water is perfectly clear, colourless and inodorous, and its taste, which is less disagreeable than that of natural or artificial saline purgatives, is almost entirely masked by the effervescence. Prepared in this manner, sea-water possesses also a great advantage, namely that it can be kept for an indefinite time, if we take the precaution of keeping the bottles lying down and in a cool place, and it may also be transported for great distances without undergoing any alteration. In a dose of three or four wine-glassfuls for an adult, this preparation of sea-water is a most gentle and sure purgative; a less dose for children is a certain anthelmintic, and as an alterative it exercises a most

salutary influence over that vicious disposition of the economy which produces scrofula, tubercles, mesenteric disease, and rickets.

TESTS OF THE URINE, AND OF ITS PRINCIPAL CONSTITUENTS IN HEALTH AND DISEASE.

[For the Medical Times.]

WATER evaporates from the lungs and the skin, carrying with it none of the salts contained in our daily food, and accompanied by scarcely any animal matter, or organic products, besides carbonic acid. With the exception of this gas, of lactic acid, saliva, mucus and bile given off from the several secreting glands or membranes, the products of all the various chemical actions going on in every part of the body, and all substances absorbed, but not retained in the blood, appear in the urine, which ordinarily amounts to half the weight of the solid and liquid food. The specific gravity of healthy urine varies from 1.005 to 1.030; as a mean, Dr. Prout states 1.012: in disease the specific gravity of urine sometimes rises as high as 1.050. A hundred ounces of urine usually contain, in solution, 7 ounces of solid matter; diabetic urine may contain 9 ounces; in the same weight of cerebral matter there are 80 ounces of water, so that the proportion of solid matter in the urine and in the brain, only differs as 7.20. According to an early analysis of Berzelius, 1000 parts of urine contain 30 of urea; 1 of uric acid; 17 of free lactic acid, lactate of ammonia, and animal matter; 17 of phosphates, sulphates, chlorides of potash, soda, and ammonia; 1 of phosphate of lime and magnesia; and a trace of silica. On the varying proportions of these principles, and the presence of sugar of albumen, the quality and quantity of urine in a great measure depend; and, although it cannot be proved that every form of disease is accompanied by a change in this fluid, it is reasonable to expect that some connexion will be discovered between all essential morbid changes in the tissues, fluids, or functions of the body and the urine, which is the result, or if the term may be used, the expression of their reactions; a ready means of ascertaining the amount of solid matter, the proportion of urea, the presence of various salts, of sugar and albumen, becomes consequently very important in practical medicine; and the following brief remarks, chiefly from Berzelius, will, it is hoped, enable the student or practitioner, with little more trouble than the stethoscope requires, to determine these questions approximately.

Few instruments are required for practical purposes—common watch-glasses, half-a-dozen test-tubes, a hydrometer, litmus paper, nitric acid, and saturated solutions of the substances mentioned, will suffice. All the tests will be found, *on trial*, exceedingly simple, and require very little skill in manipulation.

A convenient *hydrometer* is made by Newman, of Regent-street. When floating in the urine it rises in proportion as the density of the fluid increase. It is graduated from 1.000 to 1.060, so as to exhibit at once the specific gravity. Several essays should be made, in order to determine the mean. According to Henery, a wine-pint of diabetic urine, specific gravity 1.020, leaves 382 grains of residue on evaporation: this increases nearly a scruple (19 grains) for every additional unit of specific gravity, up to 1.050; thus at 1.021, the residue will be 382 grains + 19 grains = 401. grains; at 1.050 = 958 grains.

NITRIC ACID detects *uric acid*, by adding a few drachms of nitric acid to half a pint of urine, which forms no sediment, but contains

this acid; the glass, after standing twelve hours, will be found coated with a thin greyish white layer, or small reddish brown crystals of uric acid.—*Albumen*: nitric acid precipitates albumen, soluble in potash, and not again thrown down by acetic acid. *The colouring matter of the bile* is also detected by this acid; in this the urine, when mixed with an equal portion of nitric acid, turns first greenish, then dark green, dull red, and finally brown. When there is but a very small quantity of the colouring matter present, it cannot be detected by this process; but by employing an extract obtained by acting on the residue of evaporated urine with alcohol, dissipating this, and then adding nitric acid, the accustomed reaction becomes very manifest; the colouring matter may be detected in the urine before it jaundices the skin or the eyes.

Urea.—The urine sometimes contains too much, sometimes too little, and sometimes scarcely any of this substance. Dr. Prout states, that urine of the specific gravity 1.030, and not diabetic, contains urea enough to form crystals with nitric acid in the course of a few hours. Berzelius attributes this to evaporation. We once, however, observed the crystallization of nitrate of urea in a test tube, where the evaporation was trifling.*

According to the researches of Berzelius, urine of the above specific gravity, when mixed with an equal quantity of nitric acid of 1.25, deposited no crystals of the nitrate of urea, when evaporated to three-fourths of its original volume; when reduced to half the quantity, a few crystals were formed in the course of five or six hours; the fluid filled with crystals when evaporated to one-third; and reduced to one-fourth of its bulk, formed with an equal quantity of nitric acid, in a few hours, and at a temperature of 61 deg., a solid crystallized mass. To ascertain the proportion of urea, graduate a cylindrical glass, a tumbler, for instance, twice as high as broad, into equal parts; evaporate the urine to be examined on a water-bath (or on a stove) to certain points; from ten to twenty drops are then to be taken, mixed in a small glass tube, with as many drops of nitric acid of a certain specific gravity, for example, of 1.25, and to be allowed to stand six hours. The temperature at which comparative essays are made should be nearly uniform.

Bichloride of mercury does not alter urine with a free acid, when it does not contain albumen or caseum, the smallest quantity of which it detects. From neutral urine it precipitates several of the common principles.

Litmus Paper.—Blue becomes red when the urine is acid; red becomes blue when it is alkaline. Blue litmus paper, which is not reddened in the urine, becomes red on drying from the reaction of the ammoniacal salts.

Infusion of galls precipitates dissolved mucus and an extractive matter. The precipitate is very trifling in healthy urine, and is only clearly observed after the lapse of a certain time; a more copious precipitate indicates the presence of albumen.

Ammonia precipitates the bone-earth, dissolved in the free acid of the urine. Ammonia also serves to determine the relative acidity of the urine.

Lime-water discovers by the precipitation of phosphate of lime, the presence of soluble phosphates. Human urine must be first saturated with ammonia, containing no carbonic acid,

* It was the urine of a healthy individual, who had drunk a bottle of port wine the previous evening. The urine threw down an abundant sediment; the supernatant liquid crystallized with nitric acid in the course of a few hours. There was a precipitate also with bichloride of mercury, although the urine was acid.

and filtered in order to remove bone—earth dissolved in the free acid.

Oralute of ammonia throws down the lime of the urine on the application of a gentle heat. If ammonia be afterwards added, the phosphate of ammonia and magnesia will be precipitated. If ammonia causes no precipitate, a solution of phosphate of soda is added, to show whether non-precipitation is referable to the absence of magnesia, or of the phosphates.

Chloride of barium, or bitter acetate of barium, discovers the sulphates. If the urine be neutral or alkaline, it should first be rendered acid with acetic acid.

Neutral acetate of lead discovers in urine, from which the previous precipitate has been separated by filtration, phosphoric acid, which is thrown down as basic phosphate of lead. To ensure its separation from the chloride of lead, it must be washed with boiling water, and then melted before the blow-pipe.

ACCIDENTAL PRODUCTS IN THE URINE.

Urine in Dropsy.—In anasarca occurring as a consequence of general weakness, the urine becomes albuminous. In this case a precipitate is produced by the bichloride of mercury, although there may be still an acid reaction. In the progress of the disease the kidneys secrete an albuminous fluid, which is then thrown down by alum. In a still more advanced stage, nitric acid produces a precipitate, and at length the quantity of albumen becomes so great, that it will coagulate on boiling. Urea diminishes as the albumen increases; and this albuminous state of the urine, with a diminution of urea, accompanies also chronic inflammation of the liver, with protracted dyspepsia, and the close of all wasting diseases—that is, the close of all hectic fevers.

In violent vomiting, (from cancer of the stomach, &c.) the urine is at times turbid, becomes milky on standing, and deposits a white sediment.

In gout the urine usually remains acid, and more frequently forms sediment than in health; but in the fever accompanying paroxysms, the quantity of acid diminishes. Uric acid is greatly augmented in gout, and forms gout-stones round the joints, of urate of soda, and urate of lime.

Urine in disease of the Kidneys.—D. Bright first described a peculiar morbid alteration of the kidneys, in which the urine is albuminous: the tests mentioned under dropsy are applicable in such cases. In many of these cases the alteration of the kidneys appears to be *subsequent* to the albuminous state of the urine. Is it a molecular displacement of tissue, at all analogous to that caused by the infiltration of saline solutions through organic bodies?

Urine in Diabetes.—Diabetic urine is of a pale straw-colour, tastes very sweet, and smells like buttermilk. Towards the end of the disease, when hectic fever sets in, it becomes albuminous, and readily runs into the vinous fermentation: It can be made to ferment at any time by means of yeast; and afterwards affords, on distillation, a considerable quantity of alcohol. If urine be evaporated, and treated with alcohol, which dissolves the sugar and extractive matter, the sugar will, by slow evaporation, crystallize in small granular crystals, exactly like grape-sugar. Sometimes, however, only a sweet syrup is obtained. From one to two pounds of solid matter may be carried away daily by the urine, the proportion of sugar in which may be determined by causing it to ferment, and collecting the carbonic acid developed in this process over quicksilver; or, in default of this, receiving the carbonic acid in a solution of acetate of lead, from which the relative proportion of sugar in the urine may be calculated.

The proportion of urea diminishes as the sugar increases; and when diabetes tends to cure, the quantity of urea is augmented, which the test by nitric acid will make manifest.

In hysteria and spasm the urine is often colourless.

Urine in Fevers.—In the first, or cold stage, the perspiration is interrupted, and the water that should be evaporated enters into and dilutes the urine; as the heat increases, and the pulse quickens, the colour of the urine becomes darker than usual. Its free acid diminishes in proportion as the colour grows darker; and now albumen may be detected by bichloride of mercury, and gradually increases in amount. If the fever continues more than seven, or a certain number of days, the free acid again appears in the urine, which becomes turbid on cooling; this is called the *crisis per urinas*. The sediment contains no morbid product, but more red colouring matter than usual, and nitric acid in an unknown combination.

THE STUDENTS' NOTE-BOOK.—FASCICULUS XI.

By ANATOMICUS.

Form and Structure of Bone.—Bones are hard bodies, without contractibility or sensibility, very little subject to decay, the only substance to which the term solids strictly applies; they serve as a defence and support to the soft parts, either affording them a case (as the ribs and cranium for the lungs, heart, brain, &c.) or as pillars to which the more delicate organs may be attached and kept in position—such as the muscles. They are fixed points, against which the muscles, &c., act, when they commence their contractions; they form a system of cylindrical levers, by which all the movements of the body are effected, together with the muscles; they constitute the principal organs of locomotion.

Bones are arranged into three classes—first, long and round; second, broad and flat; third, irregular and short.

Bone is composed of two substances; the one a cartilaginous basis, or parenchyma, which gives the general form to the part; the other, a peculiar earthy matter, which is deposited in the cartilaginous basis.

To demonstrate the constituents of bone, digest in dilute muriatic acid; this dissolves the salts without acting on the membrane or animal matter; by burning the bone we may obtain the salts or earthy portion, and destroy the animal.

The general opinion among modern anatomists, respecting the structure of bone and the manner in which its membranous part is arranged, is—that, like other soft solids, it is essentially composed of fibrous laminæ or plates, so connected together as to form, by their intersection, a series of cells, analogous to those of cellular texture, in which the earthy matter is deposited. Gagliardi conceived that the plates were held together by small processes like nails. Bichat has denied the existence of the laminated structure of bone, and has endeavoured to show that all the facts and experiments which seem to demonstrate its presence are fallacious, and depend either upon the peculiar mode in which the bone has been treated by the operator, or some other cause which induces the laminated appearance. Duhamel's theory is, that bone consists of regular concentric rings like those that compose the trunks of trees. The structure of bone is of two varieties—the hard or compact, and the cancellated, reticular, or spongy. The arrangement of long bones is adapted to the purposes for

which they are destined. Their extremities form fixed points, from which the muscles react, and a greater space is acquired for the insertion of tendons. Their diameter on this account is increased, and their osseous matter is diffused in nearly an equal degree through their whole substance; while in the middle of the bone, which is more exposed to external violence, and where nothing is wanting but strength, the long plates are consolidated into a compact, dense ring, leaving the centre nearly hollow. This form of the part, compact matter round a central cavity, has the effect of increasing the strength of the bone without adding to its weight. The resistance of a cylindrical body to a force applied transversely, may be mathematically demonstrated—to be increased in proportion to its diameter.

Muscle.—When muscular fibre is macerated in water for some time, we obtain it in its pure state. It is white, without taste or smell, remains for a long time without undergoing decomposition; the water that remains after maceration, contains albumen, jelly, extract, and various salts; if evaporated and treated with alcohol, the extract alone is dissolved; it is of a brown colour, and acrid taste—this is *osmazome*. By the action of nitric acid on muscular fibre, the muscle is dissolved, the fluid assumes a deep yellow colour, and acquires a degree of unctuousity; azote, carbonic and nitrous gas escape; globules of oil appear on the surface; when the fluid cools this assumes a concrete form; this possesses properties intermediate between fat and wax, and is named *adipocere*.

The *colour* of muscle varies in different animals, and in different parts of the same animal. In man it is red or reddish; in many animals whitish, or of a light grey colour; and the slender fibres that form the muscular tunic of the intestines almost colourless. It is extremely probable that the colour of the muscle depends not upon the blood contained in the muscle, but on some principle in chemical combination with the fibre, and on which the peculiar smell as well as colour of the muscles in different animals depends—*osmazome*.

Form and structure of muscles.—Muscles constitute what we call the flesh of animals; old authors regarded the fibrous part as the proper organ of motion.

Muscles are composed of masses of fibres, lying parallel to each other, intermixed with a quantity of membranous matter, which may be rendered more apparent by cutting the muscle transversely, and macerating it for some time in hot-water or alcohol; the whole muscle is enclosed in a membranous sheath, which covers it in every part except where its extremities are attached to the bones. The fibres are disposed in small bundles, called fasciculi, each of which is enclosed in a sheath of membrane; each are divisible into still smaller bundles, apparently without limit. The fibres appear of great length, but it is doubted whether what appears to be one continuous fibre, may not in reality be made up of a number of smaller ones that are connected at their extremities; the opinions for the continuity of fibre preponderate. The fibre is represented as exhibiting a wrinkled or waved appearance: there is a doubt whether this be its natural appearance; may it not depend upon the condition in which it is found when examined after death, and detached from the neighbouring parts? In most muscles the centre is thicker than the rest, appears to contain more fibres, is called the belly, and terminates at either end in a tendon or expanded membrane; the interstices between the muscle are occupied by fat and cellular tissue, and form a safe lodgement for vessels and nerves. Muscles produce the general form

and outline of the body; with the exception of some viscera, muscles are more plentifully supplied with arteries than any other parts of the body; the veins are remarkable for the number of valves they contain; the nerves are also very considerable, especially to those muscles under the control of the will, being greater than to any other part of the body, except the organs of sense. The nerves belonging to the voluntary muscles proceed almost exclusively from the brain or spinal cord, whereas the muscular coats of the viscera are for the most part supplied immediately from the ganglia; according to Haller, the nerves that go to the thumb are more in quantity than those that supply the liver. It has been supposed that each separate fibre of a muscle receives a branch of an artery and nerve. Lenwenhoek describes the ultimate filament as being almost inconceivably minute, some thousands uniting to form one visible fibre; we learn from him that the ultimate fibres are serpentine and cylindrical, lying parallel to each other, are of the same figure in all animals, but differ in size; the size bears no proportion to that of the animal to which they belong; in some instances the smaller animals have the largest fibres; those of the frog are larger than those of an ox. Mayo agrees with Leuwenhoek, except that he supposes the ultimate filament to be always of the same size. Many other accounts of the structure of muscles have been published; some describe the fibres as being straight; others, zigzag or waved; others, wrinkled or knotted; some as being solid or hollow; others conceived that they are jointed—connected together like a row of beads. Borelli says, that fibre consists of a series of hollow rhomboidal vesicles, and deduced from this structure a theory of muscular contraction; a peculiar modification of Borelli's opinion was proposed by Stuart, that they were composed of a string of vesicles, formed from the substance of the nerves, which he conceived was similar to that of tendons, and that these vesicles were covered by a net-work of vessels; another opinion was that of Hook's, that the fibre is entirely composed of vessels possessing some peculiar structure, or consisting of the small branches of arteries.

Prochaska's nomenclature of the component parts of muscle, ascribe to the larger division of the muscles the term *lacerti*; *fibre* he restricts to the smaller divisions of the *lacerti*, which are still more minute threads or filaments; each of the fibres or *lacerti* is enclosed in a proper membranous sheath, but this is not the case with the filaments, a number of which are enclosed in one common sheath, and are connected by a fine circle of cellular texture. He conceived the fibre to be of the same thickness through the whole of its extent, and continuous from one end of the muscle to the other; not as Haller, &c., have supposed it, consisting of a number of smaller fibres connected at their extremities, and that the fibres are not cylindrical, but of a polyedral form; that the fibres are not always of the same diameter, they differ in different animals; that they are smaller in young subjects, and increase in size as the body increases in bulk.

In ultimate fibres their shape and extent is similar to that of the large fibre, reaching the whole length of the muscle. They differ from the proper fibre, in being always of the same magnitude; this he estimates at about 150th part of the size of the red globules of the blood, as the fibres are of different diameters; the number of filaments contained in each fibre must be necessarily different, varying from 100 to 400 or 500; the filaments have a number of depressions or wrinkles on their surface, which gives them a waved appearance, and when viewed in a certain direction makes them

appear serpentine or zigzag; but he conceived these depressions are caused by the vessels, nerves, and membranous bands, which crossed them. Fontana divided muscular fibre by a small needle into minute filaments, which seemed capable of further division; these he called the primitive fleshy filaments; some hundreds of these unite to form a primitive fleshy fasciculus or bundle. The primitive filaments are described as solid cylinders, marked externally with transverse lines or bands at equal distances; the filaments lie parallel to each other, are not twisted together as is the case with primitive filaments of membrane. Sir A. Carlisle describes the ultimate fibre as a solid cylinder, the covering of which is reticular membrane, and the contained part a pulpy substance, regularly granulated, and of very little cohesive power when dead; the extreme branches of the blood-vessels are seen ramifying on the surface of the membrane enclosing the pulp.

Bauer found that the globules of the blood, when deprived of the colouring matter, were of the same diameter with the ultimate muscular fibre, and that the fibre was composed of a series of globules, arranged in straight lines; the size he estimated a globule, was 1-2000th of an inch in diameter. Dr. Edwards calculated 1-7500th. Cullen supposed muscular fibre to be the moving extremities of the nerves.

Muscular fibres appear under different forms—first, where they are attached to membranous expansions, composing what have been called muscular coats; these are connected with hollow cavities that exist in different parts of the body, and destined for the transmission or lodgement of various bodies of a soft or fluid consistence, which propel their contents by means of their fibres; their mechanical structure is different from that of the proper muscles, the fibres being much shorter; instead of lying parallel, as is always the case with the muscles, they seem to be interlarded or twisted together; they do not exhibit that division into *lacerti* or bundles, nor have they regular bellies or tapering extremities: their attachments are also different, the proper muscles have one of their ends terminating in a tendon or fibrous membrane, while the muscular coats are attached to membranes that exhibit less of the fibrous, and more of the cellular texture: the uses are different—one is to produce the motion of some part of the body by altering its relative position with respect to the other parts, those of muscular coats to operate on the contents of the organ, and consists in a number of small contractions, in each of which a few fibres only act at the same time; most of the proper muscles are supplied with nerves either from the brain or spine, and are more or less dependent on the will; the muscular coats are in most cases supplied from the ganglia, and the action is involuntary.

(To be continued.)

HOSPITAL REPORTS.

ST. GEORGE'S HOSPITAL.

HYDROCELE.—INFLAMMATION OF THE TESTICLE, &c.

HENRY HARLAND, æt. 16, admitted May 29th, 1841, under Mr. Hawkins, with a pyramidal swelling in the scrotum, about the size of an average formed pear—its apex near the external abdominal ring, its base at the bottom of the scrotum—it is not transparent, but when tapped gives the hand a tremulous motion; causes little inconvenience; the skin of the penis drawn back.

History.—About ten months ago the swelling was first perceptible; about five months since a quantity of fluid was drawn off by a surgeon; but no injection was used after the operation. General health good. Ordinary diet.

June 3. The swelling was punctured and fluid escaped, about 5oz.—an injection of zinc Sulph. ʒj. to Aqua. Oss. was used after, and allowed to remain there about four minutes, at the expiration of which time he began to experience considerable pain in the loins and down the thigh; a piece of lint was placed over the puncture, and retained there by adhesive plaster. The patient sent to bed. Fluid clear, and albuminous.

4th. The pain in the loins, &c., remained for three or four hours after the operation. The testicle is slightly swollen and painful—suspensory bandage to testicle; pulse quick, tongue furred.

7th. Some increase of size about the parts, but no pain; to get up. R. Ammon. mur. ʒij.; sp. vini. rect.; acet. acid. dil. aa. ʒiss.; mist. camph. ʒx.; ft. lotio.

12th. Continues improving.

16th. Made out-patient.

Remarks.—The diagnosis in this case could not be incorrect, as the nature of the disease was evident from a previous operation, but as the transparency of the swelling was wanting, one of two things might have taken place, either the tunica vaginalis become thickened by inflammation, or the contents of the cavity mingled with blood, from the division of a vessel at the former operation. The latter was the correct hypothesis. The two scores of the tunica vaginalis became adherent, and a perfect cure was the result.

William Walker, æt. 20, admitted June 23^d 1841, under Mr. Babington.—A swelling of the right testicle appeared about seven weeks ago, after jumping over a post on which he fell; great pain followed, and he finally was got into the Marylebone Infirmary, from which he has been discharged but five days, since which time the following appearances have come on: great pain in testicle—apparently protrusion of bowel, as well as slight effusion into the tunica vaginalis. Haust. senne, statim.

26th. The bowel was returned yesterday, and has not descended since. Bowels opened by the senna. Tongue clean.

30th. The hernia has not descended; pain has gradually diminished in the testicle, and there now remains but slight pain in the tunica vaginalis.

July 3rd. The bowel has not again descended—the pain in the tunica vaginalis gone.

6th. Is to have a truss to strengthen the point of rupture.

Remarks.—The diagnosis in this case at first appeared difficult, but as the bowel was easily returned, there was no doubt that hernia was present. The slight effusion in the tunica vaginalis in the first instance might have been absorbed; and the coats of the sac become agglutinated together, and thus have prevented any further formation of hydrocele.

MEETINGS FOR THE ENSUING WEEK.

MON. Medical Society of London, 8 p.m.
TUES. Royal College of Surgeons, lecture, 4 p.m.
— Linnean Society, 8 p.m.
— Electrical Society, 8 p.m.
WED. Geological Society, 8 p.m.
THU. Royal College of Surgeons, lecture, 4 p.m.
— Royal Society, 8 p.m.
FRID. Apothecaries' Hall, lecture, 3 p.m.
— Royal Institution, half-past 8 p.m.
— University College Medical Society, 8 p.m.
SAT. Royal College of Surgeons, lecture, 4 p.m.
— Westminster Medical Society, 8 p.m.
— Harveian Society, 8 p.m.

TO CORRESPONDENTS.

A Scotchman.—We perfectly agree with our Correspondent, that the late regulations of the Poor-Law Commissioners, as far as they regard the national qualifications of medical men, are disgraceful to the era we live in. The observations of Dr. Hall on a similar preference of English practitioners are, as our friend says however, in quite as bad a spirit. We had hoped that these provincial dissensions, these border-squabbles were confined to quarrelsome children at the public schools, or ragged urchins in petty courts and streets. We flattered ourselves that among them only was to be found the rare and fast-fading bickerings which yet remain to memorialize, amid unity and identity, the bitter dissensions that once grew out of separate and rival nationalities. We were clearly deceived. The puny, diminishing acerbities of children are taken up by Learned Doctors, and Imperial Commissioners. The vulgar ebullitions of prejudiced spitefulness in the ignorant and the young are fixed convictions and guiding principles in the aged and the learned! The Poor Law Commissioners' in restricting by a fixed regulation their medical appointments to gentlemen with diplomas from English sources have subjected themselves, we say it deliberately—to a public impeachment. Their extraordinary procedure—which seems more like law of the middle ages than of the 19th century—has nullified privileges, and diminished powers which were guaranteed in all their plenitude to the Irish and Scotch Colleges by the most binding, nay, fundamental laws of our Empire. They have broken the bargain by which we obtained the consent of Ireland and Scotland to their Unions.

If our Correspondent is in a position to prove that in his calling as An Anatomical Teacher, he has suffered pecuniary loss from the neglect or improper partiality of the inspectors of anatomy—or any other public officer, he may lay his action and will recover damages. If one-half the charges we have heard be correct, the Gentleman spirited enough to undertake such an action would deserve well of the profession.

A POOR MAN might as well try cart-grease. PROFESSOR Holloway is one of the greatest impostors of the day, and we shall deem his splendid pretensions very hardly used if they escape exclusion in the next edition of the "Bubbles of To-day." The affidavit made before the Lord Mayor in favour of his Ointment was directly in the teeth of law, and if Dr. Bright's positive assurance be any thing quite as much in the teeth of morality. We have no doubt of its being a clear case of perjury. Mr. Holloway's title to his pompous prefix has no other foundation, we believe, than his habit of dealing in an enormous amount of professions, which by no possibility ever have, or can become anything but the merest professions. The existence of such a scamp unpunished is a disgrace to the government. We advise our poor friend to have nothing to do with Professor Hollow-away, or any other of the brawling quacks who are allowed like him to entrap the money and waylay the lives of the public.

An Old Friend and other Correspondents are informed, that we have distinctly declared that men in practice before 1815, shall not with our knowledge appear in our list. They are legal—we deal with illegal and unqualified practitioners.

Dr. King, Mr. Burt, Mr. H. Smith, D. Wyse, Mr. Thomas, Mr. Davies; communications received and under consideration.

Mr. H. H., (New-road), Mr. B., Yarmouth, Dr. S., Glasgow, Moriam, Amicus, Anthros,—declined. Canterbury.—The communication on Botany, if sent, will be carefully considered.

A Constant Reader writes strongly approving of our suggestion in reference to the admission of medical men of long standing into the College

of Surgeons without examination, and thinks it equally applicable to the Apothecaries' Company. So we think; but we do not agree with our Correspondent, that eight or ten years' practice alone should be a title to such admission, for that would admit half the quacks of the country. Consideration for the health of the public demands that, with so limited a period of practice, a diploma from some good source evidencing the possession of the customary qualifications should be demanded. The liberality of the legally qualified has, and ought to have its limits, and inclined as we are to indulge so proper and just a feeling, we would not be tempted by it to overlook the *salus populi*.

"An Old Subscriber" advises us to publish the Metropolitan List of Quacks in a first and separate list. We shall ponder on the suggestion. The Report of the Liverpool Mechanics' Institution, The Liverpool Chronicle, The Western Times, and two or three other papers have been received, with thanks.

Oxford Street is thanked for his hints.

We still beg to press on our friends the importance of aiding us to complete our List. Anonymous informants, also, are earnestly requested to forward us their names. We give our best acknowledgments to the gentlemen who have this week communicated on the subject.

Full price will be given for copies of No. 34. No. 33, reprinted, is now ready. The Index also of Vol. V. is ready. We have departed from the usual custom of including the Index and Title in the ordinary number, and present it to our readers gratis.

NOTICE.

On announcing the enlargement of our Journal, we promised the gradual addition of several attractions: our readers will find us this week beginning a course of Lectures on the practice of Medicine, by Dr. C. J. B. Williams, the distinguished Professor of University College; we venture to trust that they will be received as another step made to the redemption of our pledge. It would be idle to speak of the high standing, the merited eminence of the worthy lecturer. Admitted by his professional brethren to occupy one of the foremost places in the ranks of London physicians, he is as cheerfully recognised by them to be at their very head in that important category of maladies which are classed as diseases of the chest. So frequently apprized by our numerous readers of the special want of such a course, it is a high gratification to us to be enabled not only to supply it, but to supply it so well—to supply it in truth of the best possible materials.

THE MEDICAL TIMES.

SATURDAY, APRIL 16, 1842.

Si quis erat dignus describi, quod malus, aut fur
Quod mæchus foret aut sicarius, aut alioqui
Famosus multa cum libertate notabant.

HORACE.

A DR. ROBERT HALL has been devoting some of his abundant leisure to Medicopolitical writing, and has found in the *Medical Gazette* the congenial medium of giving vent to his dulness. Personally, the Gentleman is as unknown to us as to fame, and his opinions—just equivoicing those of any other nobody and proportionably valuable as they occupy less of one's time,

would, considered by themselves, have as much chance of being noticed by us as by posterity. But considering that his notions are virtually adopted by a partially respectable contemporary, and may, however, oddly expressed, be fairly looked on as a type of the present principles and a programme of the future policy, of that important section of the profession to which the writer aspires to belong—the Pall Mall, exclusives, the Doctor's lucubrations assume another aspect, and justify our giving them some little cursory notice.

"In our profession," says Dr. Hall, "the reforming mania has been displayed; but the reformers are, almost all, men who are envious of superiors; who think themselves worthy of the eminence, from whence they would detrude less worthy occupants—witlings who wonder at their professional obscurity, but content themselves with

"Full many a flower is born to blush unseen."

A very charming description of the body of Medical Reformers! What a fund of composed self-satisfaction must fall to the lot of this celebrated genius—this flower that has not blushed unseen! Comparisons may be odious to other people, but must be very delightful to Dr. Hall. It would be no ordinary excellence that would reach the price he tickets on himself. The man to whom he would yield the palm would be fairly entitled to take it. The Forester could extract good from everything. Our new Jacques is just as expert in extracting self-content. Even his opposition of reformers is an argument in favour of his importance. They are men envious of superiors, "presumptuously ambitious" "witlings." How, then, can he not oppose men of character so opposed to his—and, how having a direct interest in the non-success of their aspiring schemes can he avoid condemning them! But the Doctor may calm himself. We can pledge our honour to him that the Medical Reformers in no way envy his superiority, and ambitious as they are will never detrude him from any of his distinguished occupancies! Dr. Neil Arnott, Dr. Hastings, Dr. Elliotson, and contemptible reformers like them, will allow him as unenvied worthiness and distinction to enjoy all his as it is unthought about.

"The College of Physicians," Dr. Hall says, "as a licensing body, have been very much disliked. But surely the Government is as much at liberty to protect, as it chooses, the lieges from bad physicians as from bad lawyers or divines. The licences of the College have been demanded too sparingly rather than arbitrarily. How many men are practising in London without permission! what thousands in the provinces of Wales and England! the College quiet."

If there be any gentleman who can extract *sane* meaning from this paragraph, he deserves to have an appointment which we are told is in rapid preparation—the sole readership of the *Gazette* that inserted it. No other person we know of is blessed with the sort of judgment required to turn

such a lectureship to mental advantage.

Another taste of the Doctor. We must go on, for the samples are as pleasing and piquante as in a good old Portuguese wine-cellar.

The respect paid the profession in England is *alone* due to the high ground successfully maintained, through successive reigns, by the College. Men of the old universities have boasted an education, in the same groves of Academus, with the peers and the aristocrats of the land. In *active* and *after* life they have maintained a proportional *difference* and *position* for themselves and their profession; and *titles*, *opulence*, and *power*, have been levelled in the republic of *letters* and of *medical lore*! Individuals may still feel aggrieved; what mundane institution is perfect? Men of middle age, with foreign degrees, with general acquirements, may fancy there is humiliation, if they submit to an examination for the Collegiate licence. *This would* not prove the licence needless. The College aims at the practical physician; for him *alone* it was formed, for him exists. It is a thorough manly, English body.

We thought of saying a word or two on this happy exemplification of Swift's definition of style, proper thoughts and proper words in proper places. But nothing rational will dove-tail into it.

Dr. Hall has an odd fatality about him. He is always worth quoting, and never for his own sake. Here are one or two observations possessing real interest from the association they allow of with a recent proceeding of the Poor-Law Commissioners:

The laws of this country are *all* in favour of the English apothecaries.

Take the right of inspecting Lunatic Asylums.—This appointment is expressly reserved for the members of our English institutions. The act of Parliament (2 and 3 Geo. IV., c. 107) declares that the medical inspector must be a licentiate of the Royal College of physicians, or of the Apothecaries' Hall, or a member of the College of Surgeons. Let the Apothecaries demonstrate to the justices that, when they appoint any but *English* physicians, *English* surgeons, or *English* apothecaries—however intelligent the possessor of a Scotch or other degree may be—they violate an act of Parliament, which embraces in its provision every LUNATIC ASYLUM THROUGHOUT ENGLAND AND WALES.

We cannot reprobate too emphatically this miserable spirit of sectarian nationality; a spirit, which, if generally shared by the nation, would take us back to three separate royalties, nay, to the heptarchies, and other subdivisions of those very royalties. For our part, if placed in any portion of Wales, Ireland, or Scotland, we found ourselves excluded by our English education, from the offices of trust or profit which our claims otherwise entitled us to fill, we should consider that we were treated pro hac vice as outlaws in our own country, without having committed an offence, and should denounce the ill usage as an atrocious violation of those fundamental charters which made us free citizens, not of a part, but of the whole of the empire. And is that which would be thus unjust to us as

Englishmen, mutatis mutandis be less unjust to Scotchmen or Irishmen? Let them answer the question. If they send no response, but bear their indignity in silence, we beg to assure them that they deserve that there should be such distinction. Englishmen would not so submit to insulting injustice.

Dr. Hull's dread of Irish and Scotch interlopers in English practice, is natural enough. He lives among discerning patients, and his main chance of work, we presume, rests on the non-existence of rivals. As matters stand, he has time to rib up his Greek and elaborate pedantic letters which, are as symbolical of eternity, in their length, as in their having neither head nor tail, beginning nor end. With another rival the pressure of leisure would be terrific. Two things, however, his writing has taught, for which the world should be thankful. It has shown the young gentlemen ambitious of getting their thoughts between wrappers expressively green the style that is most likely to propitiate the concession—a lesson for which the distinguished Editor of the Medical Gazette, will, doubtless, thank the doctor; and, secondly, it has taught the Chaste Corporators of Pall Mall, how much reliance they may place on the chivalrous zeal, and future exploits of at least one of their Quixotic defenders. It is said that Charles I., added to the hilarity, the emphatic prayer for deliverance from H—ll, Hull, and Halifax. If Sir Henry Halford, Seymour, and Co., estimate men's qualifications and powers by any rule like ours, they will read their liturgy much in the style of the martyred monarch.

In an parochial union, not twenty miles from Doncaster, the guardians have lately offered, and a medical gentleman has been found to accept, the following truly liberal terms for attendance and medicine for a part of the poor of the division. The practitioner is bound to attend personally upon the patients in a daily ride, in all weathers and on all sorts of roads, of twenty-two miles, and also send medicines. The remuneration is £30 per annum, which is about 11s. 6d. per week, or 1s. 8d. per day, and not one penny per mile for horse-flesh. No extras are allowed, except for trusses, and the privilege of collecting the empty bottles. The salary of the previous attendant was £60; not very great for this work. "O tempore o mores.—*Doncaster Chronicle*.

COLLEGE OF SURGEONS. — At the late meeting of the Council, Mr. Guthrie was elected President, and Messrs. Wheeler and Andrews Vice-Presidents. The receipts and expenditure were as follows:—receipts, including proceeds of Court of Examiners' fees on admission to council, and on certificate £14,158. exclusive of £1299 4s. 4d. dividends on government securities. Disbursements £14,503, of which £6357 was expended on the College department, £2,823 on the museum, and £768 on the library. The Council have resolved to recognise no provincial hospital with fewer than 100 patients — no metropolitan one with fewer than 105.

PENCILINGS OF BYGONE MEDICAL MEN.

Equidem efflor studio patres vestros quos colui et dilexi, videndi; neque vero eos solum convenire avevo quos ipse cognovi sed illos etiam se quibus audivi et legi et ipse conscripsi.—*Cicero*.

OURS is a pleasant task. Flying from THE PRESENT, the common-place and all-absorbing present, its vulgar strifes, its petty envies, its emulations, its enmities, its partialities, its prejudices, its passions, we pass to a time filtered of all that is earthly—the hallowed world of remembrance—and point an ennobling attention to men who, gifted with a more than ordinary share of the divina particula aurea, have ceased to be of us, and become invested with a sacredness which disarms us of all that is combative in our judgment of them, while it calls out all the finer and higher sympathies of our nature. "Pulchrum," says Pliny, "amicitia in hoc uti, quantumque gratia valeas aliorum (mortuorum) honoribus experiri." This "*pulchrum*," with our readers' favour, we now venture to seek after; and though our path lie near that of the brilliant and powerful Probe, we shall seek it through no race of competition. While Probe, following his higher nature, raises structures to his contemporaries and in doing so, like a Phidias or a Canova, erects monuments to himself, we, less aspiring, are content if allowed, like the veteran of Pompey, to dedicate, unknown and unhonoured, our plain and modest eulogium to the genius which has won our love, or secured our admiration.

JOHN ABERNETHY.

The singularities, the prominencies, the broad lights and shadows that belong to the character of "Glorious John," mark him out for a first sketch. If another reason be wanting, we are in love with the subject. John was a noble fellow; an honest, fearless, times-despising Englishman—a man in the true sense and plenitude of the term—and one, therefore, in whom there was no guile. No eking out of the lion's skin with the fox's, ever showed that Abernethy distrusted himself. He had Herculean strength within, and however awkwardly he wielded it, he was never unconscious of it, nor without faith in it. He was none of your undistinguishable social atoms—your nobodies and your everybodies. Madame de Staël, who said "J'aime que l'on soit quelqu'un," would have worshipped him. He was all character. The assimilating the identifying influence of modern fashion and the bienséances never touched John. He had a niche for himself in the brain of every one who knew him, and *had* a brain. There was no confounding him with Mr. Such-a-one; nay, no classifying him correctly in any general category. He was not only a distinct, decisively marked individual, but a class in himself. He was what has not been, nor will be—he was ABERNETHY; and we like him for it. We like him on the same principle that Johnson liked a good hater.

The private personal history of Abernethy is a secret. Five or six facts that refer to dates or residences, are all that are left us; his professional doings and habits form with these all we know of him.

Abernethy rarely or never touched on his birth; he was probably ashamed of it with all his contempt of common notions. He was born in Moorfields, London, about 1765. An Englishman thus by birth, he was by blood on his mother's side an Irishman, on his father's, a Scotchman. Such crosses have been fortunate in more than one instance. The fusion of national temperaments has doubtless some effect on individual character, and we almost imagine that we see the distinguishing points of the three nations typified in the mind and doings of Abernethy. On the Scotch side, there appears to have been some family respectability, for John preserved the portrait of an uncle, a Presbyterian minister, and felt no anxiety to hide the light of his countenance under a bushel.

His education was precisely what one might expect from a Scottish and Irish parentage—as good as they could make it. If not classical, it was solid. Like Shakespeare, he knew little Latin and less Greek; and whatever Shakespeare did Abernethy never shrunk from owning it.

He was lucky in his teachers. Blizard, Hewson, Falconer, Potts, and John Hunter, were among his lecturers. The great physiologist seems to have been prepossessed by his industry or dawning talents, for he gave him an invitation to visit him at all hours, an advantage which Abernethy deeply deplored in after-life that he had not turned to better account. St. Michael's Court in the Poultry was the first scene of his professional practice. He entered it, he told his friend Astley Cooper, for seven years. Another seven years he was to spend in the middle of the city, another seven in the west, and then the otium cum dignitate. He reached Bedford Row, and after many a cycle of sevens, died in harness. How little are we under our own guidance! And how little does the power of habit enter in our calculations for the future!

Impressions of personal appearances are evanescent things, but Abernethy's remain yet imprinted in our minds' note-book. The hands, deep in the breeches pockets, as though they had a positive enjoyment in their capacious reservoirs—his feet revelling at their ease in a loose pair of unlaced high shoes, or half-boots—his upper man carefully dressed in utter opposition to the negligé appearance of the lower part—hair powdered, curled, and carefully arranged—the pure white neckerchief—the black coat—such was Abernethy, considered as a subject of the toilet. But then the man himself. There was an expression of easy superiority about his look, that won observation from the heedless, and an air of arch keenness that told the observer he was out-observed. The eyes, small and twinkling, prognosticated the fountain of humour that lay sleeping—within call however—quietly below. The mouth, in its half sarcastic, half good-natured curves assimilated and harmonised in expression with the eyes, giving strength to the expectations they excited. The brow high, massive, the perceptive faculties well marked, the imaginative far from unpromising, one felt that if his general appearance augured an occasional oddity, the fair expanse of the high brow protected it from a descent to buffoonery, as the aspect of the lower face secured it from being contaminated with malevolence.

Abernethy is identified with eccentricity in the minds of the present generation, and most probably will be in those of posterity. The greatness of the surgeon is altogether forgotten in the oddities of the man. For ourselves, we scruple to call them eccentricities. They were the peculiarities of a distinctly marked character—original phases of a strong and freely expressed mind. They were the genuine offshoot of the man's nature. There was no affectation about them, as we have seen in many—no imitation as we have noticed in others—no overweening notion of his own abilities, as we have perceived in a third class. They were no dramatic dress put on to suit a purpose, or gratify a vanity, as in many we have seen, who browbeat and overbear in precise proportion as they are over-estimated. They sprung out of no opinion of power possessed, but out of the possession of power itself. They were a part of his nature oozing out from no pressure from without, but from freshest, purest impulses within. They were create, not factitious.

Without wishing to defend his peculiarities, it is impossible not to feel that they were strength of character unimpaired, uncoerced, grown to seed—the luxuriance of an over-rich soil, the wilful curvetings of a mind with exuberant spirits, that loved not, brooked not, knew not of restraint. Abernethy was above conventional rules. His laws—we speak of no moral ties—were the promptings of his nature, regulated by very loose and careless notions of what was expedient and right. He did what pleased him—and luckily what pleased him was generally right. We mention not this waywardness in his praise, much less for other's imitation. With his early industry, great natural ability, and good fortune, the heedless venture prospered; tried by any other it would be ruin, and ruin well deserved.

As in Napoleon's day, there were soldiers who, folding their arms on their breast, or carrying them slouchingly behind their backs, imagined themselves incipient emperors, and half-persuaded the villagers to admit their pretensions, so have we seen lec-

turers who, burying their hands in their breeches' pockets, rudely treating their few patients, or commencing abruptly their empty lectures, believed, and made believe, that they had been bequeathed the good old Abernethy's mantle. Vain infatuation! The very piracy of manner proved their destitution. The imitator and the imitated belong to different works.

How different is the vulgar insolence of the *servum pecus*, from the happy, natural rudeness of Abernethy. When quietly pocketing the sovereign, he returned the shilling to the sedentary patient, and told her to go home and spend it in a skipping-rope; when, visit after visit he refused fee after fee from a taciturn female, and, finally dismissing her cured, explained his reason with "You don't talk!" When he gave the huge, Lambert-like baronet for his guinea the short advice—"live on sixpence a-day, and earn it"—when Abernethy acted thus, we know he acted no forced, no borrowed part—that it was as much nature to him as its opposite would have been to a Cooper; and nature in such a form, dashed with wit and spiced with goodness, though rude, is piquante and honest as piquante, and as such men like it.

A noble feature in Abernethy's character, was his frank and honest independence. No man can say of him that he ever was a respecter of persons. Rank with him never stood before humanity. No porter ever got £600 a year by ushering wealthy patients to him before their turn. The poor were safe from the "rich man's contumely" in his house. It was scarcely vice versa. An Irish viceroy found himself in his state-room unnoticed, and the ignoble crowd called in succession before him, according to their turn. His coronetted card reached glorious John; no difference; another, and another, but despite the earl, he was admitted but in his turn, and heard, in answer to his haughty and choleric inquiry, why he was so delayed?—"Wh-e-w! because you did not come sooner, to be sure." The Duke of York found him as stubborn. "I suppose you know who I am?" said his highness, in the hope of taming him. "Suppose I do, what of that?" was the cool answer of the unabashed surgeon. Again, what a noble answer was his to the friend who hoped, when Abernethy was appointed Professor of Anatomy to the College of Surgeons, that he would now come out with something extraordinary. "Do you take me," said he, "for a knave or a fool? If I could have made my lectures to the hospital students better, I would have done it, and I will give the College precisely the same lectures, down to the smallest details; nay, I will tell the old fellows how to make a poultice!" Whatever else there was in the old lecturer, there was no *gentle* nonsense. If his reputation, like a diseased rickety offspring, needed nursing, why he would have just done without it.

Abernethy, it seems clear, enjoyed a real pleasure in humbling the proud, in making the pride of rank bow to that of intellect. How supremely witty, while marked by this sense of mental superiority, was his answer to the titled fool who told him he would make him eat his words. "It will be of no use," replied he, "for they will be sure to come up again." We have here the explanation of half of his rudeness. For the moment, his highest visitors acknowledged his precedence, and he was pleased to enjoy the full sense of it. His rudeness to less exacting visitors, flowed from a natural impatience of *gêne*. He could not tolerate trouble—he would not nonsense. He had practically no notion of a state of things in which one man sacrifices a part of his pleasures, to get others to sacrifice a part to him. He wished to have all his own way, and yielding himself to his own impulses, to make others. Such tempers as Abernethy's are less rare than such talents, and as a consequence, we have society daily crushing their possessors on the wheel of their own imprudence.

We should be extremely wrong if we formed an estimate of the powers of Abernethy's mind from the peculiarities they are usually identified with. There was no where a shrewder observer or sounder thinker. Wayward and obstinate as he seemed, he was, on professional matters, neither prejudiced nor a bigot. An enemy to the Jennerian innovation, he could yet examine into its pretensions, weigh the evidence in their favour, and publicly

avow his conversion when the *oi polloi* were complimenting themselves on the sagacity of their sneers, the profound wisdom of their incredulity. His observations on the constitutional origin and treatment of local diseases may be cited as a very specimen of lucid arrangement, keen discernment, and accurate discrimination, vigour of thought and expression. The work is the model for a medical style. It shows a powerful and equably sustained course, free of affectation, which, in many of its characteristics, reminds one of Bolingbroke's best reasoned works. The whole subject throughout its details and dependencies is evidently under his eye all the time he is writing, though it is equally clear that he is paying the most careful attention to every word of the sentence he is engaged about. With the ready and powerful hand of a master, he breaks down crowded and entangled matters into clear and well-marked divisions, and throwing them into marching order, he makes them pass before us in symmetrical files, each of which, while in the very best position it can occupy relatively to itself, is so placed as to receive the greatest possible support from every thing that surrounds it. Each is placed alike to receive and reflect light. People who talk of Abernethy's bearishness, have a surprise awaiting them in the perusal of his writings.

It must, however, be admitted, that in later life Abernethy lost part of that unprejudiced, comprehensive spirit in which he was accustomed to view matters, and that misled by the numerous proofs he saw of the connexion of disordered digestive organs with most diseases, was hurried into a crotchety, and we had almost said, empirical system of tracing all maladies to this one source, which could not fail to have proved highly mischievous. An anecdote given us by Mr. Pettigrew, illustrates this foible: "I was once consulted," he begins, "by a lady for a common affection of one of the bursæ mucosæ of the knee joint, occasioned by a blow received against the edge of a step. She went to Mr. Abernethy, and was about to show the affected part, when he rudely exclaimed, 'I don't want to see your knee, ma'am! Allow me,' and he pressed his fist with force upon her stomach. She called out, and he declared her digestive organs to be at fault. The treatment she received occasioned her to have an attack of hysterics, in the alarm at which I was called in. She recovered without taking a single dose of medicine. The case was strictly local." The truth was, that Abernethy's early training bore no proportion to his natural abilities or after-success, and it seems a law of society, that no such man can reach 70 without a hobby. The stomach was his hobby; he fairly rode it to death. His last expression was, "I ill-treated my stomach in my youth, it ill-treats me now in my old age." Quaint words! The epitome of his character as of his medical belief.—NEMO.

OVARIAN DROPSY.

To the Editor of the 'Medical Times.'

SIR,—Permit me to acquaint the readers of your valuable journal with a few more facts relating to the above case, earlier notices of which may be found in the "Medical Times," vol. iii., page 311, and vol. iv., page 221. On the 9th of last December, Mrs. B. was again tapped for the eighth time, bearing the operation with her usual firmness, and no particular exhaustion supervening. Seventy-five pints of a semi-transparent fluid were removed, the chemical qualities of which were similar to that drawn off at the last operation, twenty-four weeks previously. The total quantity of fluid removed by the eight operations amounts to 54 gallons 3 pints, or 435 pints, within the period of seventeen years. Her constitution is but little impaired. A few months since, Dr. James Copeland saw her, his opinion was, that Mrs. B. might yet live many years.—Believe me, dear Sir, your obedient servant,

SAMUEL S. BRAME.

Lowestoft, March 30, 1812.

BANDAGES IN MIDWIFERY.

§To the Editor of the 'Medical Times.'

SIR,—Permit me in reply to the observations which appeared in your last number from Dr. Hawkey, on the Bandage I use in Midwifery to state that he entirely misunderstands my method. —The *shawl* to which I so often have recourse is not applied in a three corner manner, but similar to the way it is folded to surround the throat in cold weather, for after folding it so as to form a triangle, the two corners then in apposition are doubled back to any width considered advisable. —In that form it is spread over the abdomen and tightened at discretion. —'Tis true the broad roller, secured at the hips is well adapted to the purpose, but when such a thing is not provided—as the Doctor would too often find to be the case were he practising in a remote country district—he would be very glad to have a *shawl* at hand I promise him. —At least such has been the result of my experience, and as *experientia docet*, I take it a "plain unvarnished" fact, is preferable to any theory, however ingeniously devised.

With my learned friend I regret that it should be found necessary in the present day to urge the adoption of this or any other well-established point of practice, but such is human nature, that we are all well aware it is requisite occasionally to do so. Indeed, I know practitioners of long standing, who malgré their London education (for I believe our own metropolis affords equal facilities with Dublin, or any other school for studying every branch of the profession, notwithstanding the Doctor's partiality) who seldom resort to the bandage except in cases of danger. It was this in some measure that induced me to make the remarks to which you were kind enough to give a place in your valuable periodical, and for which I am greatly obliged, inasmuch as it has caused this discussion, convinced as I am the more truth is canvassed, the clearer will its precepts appear.

I have a few remarks to make on the exhibition of the Ergot in lingering labours, but I shall reserve them for a future opportunity, if you will be able to find a nook for them.—I am a great advocate for the publication of well authenticated cases.—I am, Sir, your's obediently,

W. THOMAS, M.R.C.S.

Fembroke Dock, 9th April, 1842.

LITHOTOMY.

By PROFESSOR FERGUSON.

AN operation for the removal of a calculus from the bladder of a boy, aged 17, was performed on Tuesday, the 5th of April, at King's College Hospital, by Professor Ferguson. The patient having been secured in the usual manner, the sound was introduced, and the presence of a large stone detected. Mr. Ferguson made a free external incision, and after cutting into the bladder and inserting his finger, found the stone considerably larger than he had anticipated. In extraction it slipped once from the forceps, and required considerable force to effect its entire removal. The whole operation was concluded in about five minutes and a half, in a most cool and dexterous manner. Mr. Ferguson, in his subsequent remarks, stated that the boy had been suffering from stone for twelve years, and that he had passed one small calculus eight years ago. He preferred lithotomy in this case to lithotrity—1st, on account of the age of the patient; and 2nd, on account of the size of the stone; and trusted that, as there had been no unusual features in the opera-

tion, the case would terminate favourably. A circumstance was alluded to by Mr. Ferguson which has not been mentioned by any author on the subject—viz, "the utility of a *small* aperture in the bladder, so that by the finger you can prevent the escape of the urine till the introduction of the forceps, when the sudden gush will inevitably propel the calculus between its blades."

REVIEWS.

On the Treatment of Stone in the Bladder, by Medical and Mechanical Means. By R. Willis, M.D., &c.

By the preface we were led to believe that the principal purpose of the above work was to lead "Physicians back to the long-neglected class of medicines called *Lithontriptics*," in the treatment of calculous complaints; and that evidence would be produced, from the personal experience of the author, "enough to satisfy us that these medicines, taken internally, and used in the way of injection, have even greater powers than were suspected in the palmy days of their employment some century ago." In this expectation we were somewhat disappointed, for on turning to the next page we found the author recommending "an almost unfailling refuge in the operation which I have described under the title of *Lithectomy*."

Before entering, however, on the subject that appears to form the gist of his labours, (for that is reserved for the fifth and last chapter of the work), the Doctor discusses in succession,—

1st. The removal of stone by solution.

2dly. The removal of entire calculi through the urethra.

3dly. The removal of stone piecemeal, that is to say, by lithotrity; and,

4thly. The removal of stone by lithotomy.

That certain calculi are capable of solution and disintegration, as those consisting of the lithic acid and lithate of ammonia, as well as those formed of the triple or mixed phosphates, can be proved by chemistry. The means by which these are accomplished are the alkaline remedies; they act as disintegrators by dissolving the matter that cements the ingredients together, and as solvents by impregnating the urine with their alkaline properties. The cement, in the first instance, principally consists of lithic acid, which alkalies dissolve, and where they succeed, the phosphates fall into an amorphous powder, and are evacuated with the urine.

The mode by direct solution is accomplished in two ways. It is well known that the pure alkalies, as well as their carbonates and bicarbonates, pass the digestive organs unchanged, provided they meet with nothing in the ingesta to neutralize them; in which case they are absorbed into the circulation, and thence excreted afterwards by the kidneys still unchanged; in this way, held in solution in the urine, they come in contact with the stone, and thus gradually dissolve it. The other mode of solution is still more direct—the solvent is injected into the bladder.

The attempt to dissolve stone in the bladder by internal remedies had long been abandoned, a circumstance principally attributable to the brilliant progress of surgery in getting rid of the stone at once by an operation. Lately, however, the endeavour has been revived in France, an event brought about through the great relief that has been obtained in many calculous cases by the use of the mineral waters of Vichy. These waters are strongly impregnated with the bicarbonate of soda, (15 grains in an ordinary glassful,) of which it is

usual to take three or four glassfuls in the course of the day. M. Darut first introduced these waters to public notice in 1826. This has been followed up by M. Petit, who, in a work published in 1834, adduces evidence that cannot reasonably be questioned, of the efficacy of the Vichy waters in the various forms of calculous disorders. That the virtues of these waters depend on the presence of the alkali has been further demonstrated by M. Robiquet, who has given the bicarbonate of soda, largely diluted, with equal success. However, both Vanquelin and Fourcroy long ago recommended the same means of curing the stone; indeed, the curative properties of the once celebrated Stevens' remedy entirely depended on the soap it contained, and the diluents that were given with it.

At present, a wordy war has been carried on in France, between the disciples of the solvent medicinal means and the lithotritists. Civiale and Leroy, afraid lest their "occupation" should be "gone," are more than suspected of having had recourse to means not the most creditable to detract from and destroy the reputation which the waters of Vichy have acquired. The latter of these gentlemen, in particular, has been charged with stating what "n'était nullement exact" in the narration of a case wherein, according to M. Leroy, calculi had been reproduced four times in the course of three years, and always by so much the more speedily as the patient had drunk the Vichy water in larger quantity. But it seems that the patient in question assured Dr. Petit, in the most positive manner, *that he had never drunk any Vichy water either at Vichy or at home* before the month of June last, the date at which he came to drink at the fountain head. However, the efficacy of these waters cannot be doubted in many cases, since patients who had been sounded, and a stone distinctly ascertained to exist, after taking a course of these waters have been sounded again, when no stone could be detected.

The competency of solvents injected into the bladder by the urethra to act effectually on calculi has likewise been determined. Sir B. Brodie in one case used a weak solution of nitric acid as an injection, which so reduced the size of two calculi that they escaped by the urethra; and Dr. Ritter relates an equally successful case resulting from the employment of caustic potash in Hufeland's Journal. (Baud. 25, s. 119.)

Chapter II. treats on the method of removing calculi entire through the urethra. This event not unfrequently takes place spontaneously. Some time ago we had a case under our care in which thirteen stones, varying in size from a pea downwards, unexpectedly came away in a stream (if the expression may be used of solids), while the patient was endeavouring to make water: a complete obstruction to his efforts was first experienced, which suddenly gave way, and the calculi, followed by a strong flow of urine, were evacuated; the noise they made against the bottom of the vessel quite astonished the patient.

The same end has been attempted by dilating the urethra with bougies, and Dr. Willis relates cases of their successful use from Bourguenod. Besides the result of M. Bourguenod's practice, that of Baron Boyer, Mr. George Bell, and the late Sir Astley Cooper, by the same means, is stated. Nevertheless the method of extracting calculi through the *unprepared* urethra is now, we believe, almost entirely abandoned, firstly, on account of the difficulty of the operation and uncertainty of success, and, secondly, from the dangerous, and sometimes fatal, consequences that have ensued from the trial.

The third chapter of Dr. Willis's work contains an historical account of Lithotrity, begin-

ing with the ease of Major-General Martin, and describing the rude means he employed to crush and comminute a stone he had in his bladder. For this, we refer to the work itself, and avail ourselves of the occasion offered by its style to make a remark.—It has been an object with us (and will continue to be so) to direct the attention of medical writers to a proper use of language, and we think this cannot be done more usefully or more in place, than by noticing and exemplifying instances either of bad taste or incorrectness as they present themselves under review. The book before us, not unfrequently, instances the former of these defects—for example, the author says “the study of the uropoietic system in both France and Germany has been *long at a discount* ;”—he speaks of the kidneys being the *theatre* of the morbid actions—of the stone being *rebelled against*—of such hackneyed common-places as “the ills that flesh is heir to”—of “urinary pathology having found *tongues* and pens in England alone to *proclaim* its importance, and *push it forward*.” Now, this last figure of speech is particularly impure and unhappy, and no one will dispute *its bad taste*, for assuredly that *tongue* is not to be envied which is *pushed forward* into anything urinary.

We learn from the preface that the first three chapters of Dr. Willis's book had already appeared in the ‘British and Foreign Medical Review.’ The above remarks on language suggest a passing observation on the same subject in reference to the Editor of that Journal's letter to Dr. Carpenter on the Paine controversy, affording, as it does, an example of feebleness and puerility we were not prepared for. Besides being written in a style characterised by all the bad taste of a school-boy, unchastened and unimproved by age and the practice of writing, and altogether so different from the eloquence of the plagiarisms stolen from Dr. Channing, it is sillily flippant in spirit, and lamentably illogical in argument, exhibiting in truth a very sorry specimen of what the Editor himself is capable of as far as language and argument are concerned. We are the more surprised at this in an author so renowned for his extraordinary acquirements, as it is not an every-day undertaking to be able to translate a work from the French. But to return to Dr. Willis.

In the fourth chapter, the author enters on the subject of lithotomy, and occupies it with a running commentary on the practice and opinions of Velpeau, Dupuytren, Crosse, and Civiale: but it is the fifth and last chapter of this work that contains the gist, it would seem, of what the author promised the medical public in writing his book—namely, to submit to their consideration a preferable method to any precedingly noticed of removing a stone from the bladder, and that is by “aperture made into the urethra *in perineo*, and slow dilatation of the prostate gland and neck of the bladder.” But the grand objection to this proposition, independently of every other, is that it is based simply on an opinion, for it does not appear that the author ever practised this method himself.

As a diligent and faithful digest of what has been latterly written on the subject of calculus, Dr. Willis merits our commendation; we only regret that he has not enabled us to make it more general, by superadding to the character of careful compilation, that of personal experience in the matters on which he treats.

Hydrophathy, or the Cold Water Cure, &c., &c.
By T. Claridge, Esq.

THE love of approbation, the passion for distinction, the desire of applause, or the lust of

notoriety, excites one man to invent a tale, another to eliminate a poem, a third to attempt a tragedy, and a fourth to publish his travels. Hence we have novelists, who pourtray nothing new but their barrenness of invention and sterility of intellect; poets, who have no claim to the title but the crudities of conceit, or the quaintness of diction; dramatists, who distort facts and shock probability—who perpetrate works because they have nothing else to do; and garrulous hypochondriacs, who write elaborate dissertations to record their credulity, and chronicle their ignorance. A desperate impostor, with lofty pretension and impudent assumption, no sooner rushes on the stage of publicity, than some noble Earl, or most noble Marquis, follow in his wake, and testify to the catholicity of his pills, the universality of his ointment, or the omni-applicability of his nostrum. St. John Long (according to his admirers) commanded health, the secrets of Hygeia were in his custody—he dispensed her blessings, appropriated her powers, invoked her presence, and secured her aid; in short, he was delegate, minister, and hierophant, at the altar of her divinity. Morison, treading in his footsteps, decimated diseases, and annihilated decrepitude; hypochondriasis, and all the horrible attendants of dyspepsia, fled at his approach—or rather from the artillery of his pills. It was reasonable to suppose from these remedies, that the antediluvian age had returned, and that mortality was a dead letter in the circle of the present generation. But death, our most inexorable creditor, became alarmed. The immigration (can we call it so?) into his kingdom began to decline—he rose in the might of his anger, and reserving himself for one mighty effort, while he permitted their patients to serve, snatched away the doctors themselves! But vain was this signal retribution. Afar off, among the abrupt and precipitous mountains of Silesia, in silence and in solitude, in ignorance and obscurity, a new prophet arose. The light of his doctrines rapidly illuminated, as if by magic, the gloomy confines of the mental medical world of Germany, while the effulgence of the rays reflected from the superfluity of their splendour, fell upon the head of an English invalid, but unlike the divine gift which manifested itself about the face of the Hebrew prophet in a circle of glory, his acquired knowledge exhibited itself in the shape of—a cold-water pamphlet!

In our former notice of this work, we perhaps treated the question too lightly. Ridicule may be, to a certain extent, the test of truth; but there are many who cannot perceive the absurdity of their position by the scintillation of wit, or the folly of extreme opinion from the exaggeration of caricature; while there are others again, who are ready to exclaim, jokes are not arguments, and jesting is not reasoning. For the sake of these men, we shall restrain the great desire we entertain to treat the whole doctrine of hydrophathy as a solemn levity, and Mr. Claridge as a sly wit. We shall, therefore, show how very false in fact, and how very weak in reason, are the arguments which have been adduced by Priessnitz and his followers in support of their favourite treatment.

Against the proper and moderate use of water we have no arguments to urge, and fortunately they are not required; but in the immoderate and universal application upon all occasions, externally and internally, of even so simple an element we must loudly protest. Suppose a case of delirium tremens, with the mucous membrane of the stomach morbidly irritable; the bowels confined; the tone of the bladder weakened, the mind wandering, and the membranes of the brain thickened, or the brain itself diseased, and the entire constitu-

tion either destroyed, or the stamina nearly lost;—would any man in his senses—would any practitioner who was acquainted with any of the known laws of the animal economy, or the very first principles of therapeutics—would any of the numerous lads, green from the country, and just out of their apprenticeships, venture to order such a patient a gallon of cold water, wet blankets, and a Das Wannenbad, or half-bath? Suppose a case of rheumatism—acute rheumatism—would any one suffering under this painful affection, which the slightest variation of temperature exasperates into intolerable pain, and the slightest breath of cold air excites to actual anguish—be induced, at least, in this country, to drink two or three quarts of water, and then swathe his limbs in wet bandages—when he knows from sad experience that the disease has been engendered, and is increased by cold air and damp? We know that such a mode of treatment would severely test the powers of endurance, if it did not destroy the life of the patient. Nor is it any argument against our doctrine, that one or two, or even more patients under the cold water treatment may be recovered. There are all the elements of change of air, amusement, travel, hope, and *faith* in the practitioner to be taken into consideration; besides the very strong *prima facie* statement, that Priessnitz will only receive those into his establishment at Graefenberg whom *he knows he can cure*. That patients have recovered from very dangerous and apparently desperate diseases under very opposite modes of treatment nobody doubts, who has had any experience in medical practice. We remember a case of trismus in a female which had continued upwards of a year (the patient being fed through the aperture made by the extraction of a molar tooth, which was cured by acupuncture), when all other remedies had failed. We met also with another case cured by acupuncture, viz., a tumour on a negro's neck towards the right clavicle. He fell and dislocated the humerus, which was never properly reduced, and when he came under our care had then been in hospital some two or three years. The tumour disappeared, without any discharge, and the patient very partially recovered the use of his arm—but we could not from these two cases confidently recommend acupuncture in trismus, or tumours generally. Not so with our cold water prescribers. They insist not only on its application to all diseases, but nearly to all persons, though there is an evident contradiction in their practice, since their great idol only receives those he thinks or knows he can cure! In cases of acute fever, especially in the West Indies, we have derived the most decided benefit from cold spunging, and applying wet bandages to the head—but even these required judgment and discrimination, and were not universally attended with success. With regard to the tepid-bath we found it, if not prejudicial, at least not so marked in its results as to induce us to place much confidence in it. The same may be said of the cold bath—the fatigue and labour attendant upon the patient's getting in and out of it seemed to neutralize any good which might have been derived from its use, and we found the cold spunging answer all good purposes, without its attendant inconveniences. This practice was efficacious not only in military practice—where we averaged from forty to fifty fever cases a month—but in naval, and private practice.

With respect to drinking *large draughts* of cold water in fevers, we can speak just as confidently; they were *always* prejudicial. They distended the stomach and intestines, and gave rise to flatus, sometimes to an extent that was really alarming. From the *moderate* use of water, or tamarind water, or cocoa-nut water,

and similar drinks, much good was always derived. But they required care and judgment in prescribing, and firmness and resolution in exhibiting, once in nearly every case the patient would, had he been permitted, have drunk too large a quantity.

With reference to scrofula, lepra, or elephantiasis, the latter in its most frightful forms, some benefit has been derived in our practice from the application of cold water—but not internally. We have also seen two cases of gout checked, if not removed, it was said, by plunging the feet into cold water—but the remedy was too violent to induce us to recommend it. The patients in these cases were their own physicians, and applied the cold water on the authority (we believe) of Horace Walpole, who says, that Queen Caroline, consort of King George, kept off an attack of gout by plunging her feet in a bucket of cold water whenever she found it coming on. In the exanthemata, water, for the purposes of cleanliness and comfort, may be freely recommended, and for the cure of yaws (Framboesia), among the negro children in the colonies, the running stream is always resorted to. There are some other classes of diseases—as inflammations—which are certainly allayed by the judicious use of water, but not to the extent recommended by Priessnitz; and when Mr. Claridge tells us that “itch and ringworm, erysipelas, syphilis, gripes, and mercurial diseases; deafness, ear-ache, and tooth-ache; FRACTURES, dyspepsia, inflammation of the abdomen, and loss of sleep, together with diarrhoea, drowsiness, spitting of blood, ACCOUCHEMENT, *les fleurs blanches*, and CRAMPS OF THE STOMACH,” are all cured, and by cold water, we are perfectly astounded, and wonder how any man could have the hardihood to affirm, and another the weakness to believe, that such dissimilar and dangerous affections and natural phenomena could be cured by one remedy, and that the most simple in the pharmacopœia! The author, with characteristic confidence, says—“Cold bandages are applied to various parts of the body. * * * Those afflicted with complaints of the chest and throat, wear one round the neck *at night*; those with weak or inflamed eyes, wear one at the back of the head and neck *at night*; those who have weak digestions, and are *otherwise debilitated*, wear *one round the waist all day*; whilst gouty and rheumatic subjects also have their feet incased in them by night.” (p. 104.)—“There is no local chronic disease which does not require the application of these fomentations; amongst which may be more especially enumerated gout, rheumatism, the enlarging of the bones, the arthritic concretions, abscesses (with or without ulcers), and chronic inflammations. Exterior injuries, and *purulent* effects of the cure, are treated in the same manner; as are also cancers, caries, and syphilitic ulcers. They calm the pain, and aid the cure, much better than ointments and plasters.” (p. 105.)—“When fever commences by cold shiverings, the bath is persevered in even for hours, until a general heat is infused into the body. When there is a difficulty in obtaining a bath, a sheet perfectly wet, that is not wrung out, should be thrown over the patient, and that should be well rubbed against the body for five minutes.” (p. 107.) “To those who have never been at Graefenberg, or any other hydropathic establishment, the application of wet linen will doubtless appear fraught with danger; but so little is this the case, that they are the first steps taken by Mr. Priessnitz with aged people, with infants, and with those of weak, nervous, or extremely delicate constitutions, in order to harden the skin and prepare them for the bath, and to strengthen them generally previous to any other

application of the cure. *So far from persons subjecting themselves to the risk of catching cold by wearing these bandages at night, we find at Graefenberg numbers of the greatest invalids almost encased in them nightly!* Let any one in pain, or who has a sore throat, try them, and he will soon be a convert to our opinion.” (*Idem.*)

These are bold and daring assertions, which astound if they cannot convince, and silence if they do not conquer incredulity. To reason with a mind like Mr. Claridge's, predisposed to admit the utmost absurdities of Priessnitz is like attempting to hew blocks of marble with a razor. So far therefore as he is concerned we dismiss him from our columns as incurable, while to our junior readers we beg to address them in the well-known remark of Blumenbach on another occasion, that “what is true (in hydropathy) is not new, and what is new is not true.”

MEDICAL MEMS. OF THE WEEK.

BY PERISCOPICUS

CAROTID ANEURISM.—Mr. Growse, of Hadleigh, as a proof that surgeons should feel less difficulty in tying the artery than they usually manifest, publishes a case of carotid aneurism, on which Mr. Key successfully operated.—“The sheath of the artery was exposed by an incision carried for two inches along the margin of the sterno-mastoid; and laying bare the fibres of that muscle, and also the edge of the omo-hyoidens, as it crosses the carotid artery. A few arterial ramifications were divided, and gave rise to some infiltration into the adjoining cellular tissues, that much obscured the distinction between the coats of the artery and its sheath. This was rendered still more difficult by the almost entire and sudden cessation of pulsation in the vessel, in consequence, it may be presumed, of the nervous depression produced by the operation. A similar effect had been observed to arise in the aneurism, when the action of the heart was influenced by the mind; pulsation could be scarcely felt in the sac. Much care was, therefore, required in detaching the artery from its investments, which protracted this part of the operation. The descending branch of the ninth pair of nerves was large, and lying upon the sheath. A stout silk ligature was passed under the artery from the outer side, by means of a curved aneurismal needle, and secured in the usual manner. The after treatment was simple—viz., perfect quietude, watching the symptoms as they arose, and allaying general irritation. About three or four hours after the operation, Miss S. became very restless; she was directed to take twenty minims of tincture of opium in a small quantity of camphor mixture, which did not produce the desired effect; the dose was repeated about two hours afterwards, and in a short time she fell into a comfortable sleep. From this time there was not a single unfavourable symptom.

SPASM OF THE HEART.—Dr. C. J. B. Williams states that defective action of the heart is sometimes produced from *spasm*, as is sometimes found in *death* suddenly produced from drinking much cold water after excessive sweating, or while the body is in a state of *high temperature*, or drinking large quantities of *spirits* after *excessive exhaustion* from *fatigue* is equally likely to be followed with similar *sudden* and *fatal results*.

ARTIFICIAL ANUS.—Dr. Watson says that this expedient is feasible in those cases only in which the obstacle is situated near the termination of the large intestine; that is, in the

rectum, or in the lower part of the descending colon; for here only can it be ascertained, with anything like certainty, what is the exact place of the impediment, and here only may the colon be pierced from behind, without injury to the peritoneum. Under no other circumstances, in his opinion, would an attempt to relieve the patient by cutting down upon and opening the bowel, be justifiable. An artificial outlet in the loin would probably be less disgusting to the patient, and less offensive to others, than if it were in front of the body. I am not aware, he added, that this operation has ever been done in this country.* In an appropriate case I should think it right to mention, though I should be slow to recommend this *anceps remedium*. The risk of failure, and the penalty of success should be set fairly before the patients. The choice between certain death on the one hand, and chance of living with a very loathsome bodily infirmity on the other, must be made by the *patient himself*.

CONCUSSION OF THE BRAIN.—Mr. Stafford states that in cases of concussion of the brain, as warmth returns, so will the symptoms change: You will find, he says, that the patient now will begin to have a consciousness; if you shake him, he will rouse as if from a heavy sleep, and having muttered something, will fall again into a drowsy stupor. The sickness will continue, but the skin will become hot, and the pulse will gradually rise until it beats with violence. Now will be the time to bleed, and it must be done largely, even to syncope. Now re-action has really taken place, and we must employ all our means to keep down inflammation. It will not only be necessary to bleed from the *arm*, but blood must also be taken from the head. Should the pulse rise, the patient must be bled again, and venesection must be repeated as often as the symptoms require it. The head also must be shaved, and a cold lotion constantly applied upon it. The bowels must be freely opened, which will be best effected by giving large doses of *calomel*, combined with *jalap*, and followed by a *black dose*, besides which it will be necessary to keep the bowels open by *saline purgatives*, and to keep down fever by *antimonials* and other *febrifuges*.

DETRUNCATION OF THE FETUS.—Dr. Campbell, the inventor of the “*Kepalepsalis*,” admits that he did not until recently imagine that *detruncation* was at all, if ever, necessary; however, he now has cause to correct in his mind this error, in which he has so long indulged. He says, that in cases under peculiar circumstances, he now, for the first time, finds it is absolutely necessary, namely, when an unusually *large head* and *fœtus*, a very contracted *pelvis*, with a *footing presentation*, are met with, may and do require this painful operation. We are afraid after all that the doctor has made no discovery.

POPLITEAL SPACE.—The space commonly called “popliteal” is *diamond shaped*, and it is well to know this.

CONCEPTION AND IMPREGNATION.—Mr. C. Black says, that the *semen* passes no further than the uterus, and that impregnation may, but does not generally, take place until the ovum enters it. Secondly, that the seminal fluid is absorbed by the mucous membrane of the uterus, in consequence of which the vascularity of the organ is increased, which causes its subsequent enlargement and the secretion of the decidua vera, by which the ovum is impregnated.

HEMEROLOPIA.—Mr. J. Mornton considers night-blindness to be rare in this country.

* We know of two instances, one by Mr. Teale, of Leeds, another by a surgeon, of Charing Cross Hospital.—Both cases were unsuccessful.

It is not uncommon within the tropics, particularly in the region of calms about the equator, when the sea sometimes looks like glass for two or three weeks together, and reflects a vertical sun with great intensity. At these times sailors sleep on deck during their night-watch, and hence the supposition that the moon strikes them blind. The pathology of the complaint does not seem to be well understood. Is it a morbid condition of the retina from congestion, or is it merely a periodical state of complete rest or insensibility, as a result of exposure to intense light?—for the patients do not suffer any uneasiness, and their eyes are quite uninfluenced by bright artificial light.

DR. DAVIS'S OSTEOTOMIST.—Dr. Hall Davis says, that after many years experience in the use of his father's instrument, during which he had met with cases of considerable difficulty and pelvic contraction, he asserts he never found the osteotomist inadequate to the fulfilment of all he could desire; on the contrary, the use of this instrument has greatly smoothened the difficulties he had to encounter, and has enabled him to effect deliveries through pelves of small dimensions in considerably less than half the time occupied in preceding labours, when the osteotomist had not been had recourse to, and he would add, with infinitely less suffering to the patient.

DRY GANGRENE OF THE ARM.—Mr. Toogood gives the following case:—John Silver, aged 51, a stout, muscular man, whose constitution had become much impaired by free living, and constantly driving a night-coach to and from Exeter to this town, felt considerable pain in his left-arm whilst performing the journey on a cold, rough night, in the month of February, 1813. On the following morning the hand was found to be dark coloured, cold, and shrivelled, which appearance, on further examination, extended to the elbow. He consulted an old practitioner, who recommended fomentations with mustard and horse-radish, bark, wine, and brandy. These remedies produced no good effect, and the disease proceeded until it had nearly reached the shoulder-joint. At this time I saw him, and proposed amputation as the only thing to be done. It was refused, but ultimately the limb was removed immediately below the joint. The pulsation of the brachial artery was so feeble that it could scarcely be felt before the operation; and when the vessel was divided it bled very languidly, the discharge being so trifling that it seemed scarcely necessary to apply a ligature. The wound slowly, but never completely, healed, and he recovered sufficiently to enable him to go about for some months, when he died. The progress of this disease resembled gangrena senilis, many examples of which I have seen affecting the lower extremity in old people; but this is the only case in which I have observed the upper extremity affected. As no post-mortem examination could be obtained, it was impossible to ascertain the condition of the blood-vessels, which would have been very desirable.

PIA MATER OF THE BRAIN.—Dr. Fisher says there exists a great analogy between the pia mater of the brain and spinal chord and the subserous tissue of other organs; and, indeed, where the former is united with the arachnoid, the analogy becomes complete. Observation has led me to consider the subserous cellular tissue as being more frequently than any other tissue of the human frame the seat of morbid products.

CAUSES OF DEATH AFTER TRACHEOTOMY IN CROUP.—Dr. A. Becquerel states that these causes are, first, bronchitis, or an excessive secretion of mucous in the bronchi; second, pneumonia; third, the persistence of the original

disease, and especially the presence of false encumbrances in the bronchial tubes; fourth, convulsions; fifth, finally in some cases death occurs without our being able to detect any local disease, and it seems to result from the general condition of the patient. This latter mode of termination should not be lost sight of when we are called upon to weigh the chances of success or failure of tracheotomy.

CARIES OF THE OCCIPITAL BONE.—Dr. Kirkpatrick exhibited a specimen of disease affecting the membranes at the base of the brain, attended with caries of the occipital bone, without any prominent symptoms during life. The patient was a poor woman who had been in many hospitals, and was admitted about a month since into the North Union Workhouse with a large bed sore on her hip. With this exception she did not complain of anything beyond mere debility, and the treatment was directed to the restoration of her strength, and the cure of the ulcer; she remained, however, in the same state, and after some time she was attacked with occasional vomiting, and complained of pain in the back of her head; she had no paralysis or convulsive motions; she became gradually worse, and died a few days since, without any prominent symptoms. On examination, the left lobe of the cerebellum was found to adhere closely to the membranes, and the latter were separated from the bone by a quantity of lymph: where the lymph lay in contact with the bone, the internal table was corroded to a considerable extent. On examining the internal ear, it was discovered that the membrana tympani was absent, but the ossicula were still in their places, and there was no disease in the mastoid cells.

SCARLET FEVER.—Mr. E. Copeman says that the prevalence of scarlet fever during the last autumn and present spring has afforded him ample opportunities of witnessing this disease in all its forms, from the simple efflorescence of the skin, with or without inflamed fauces, to the most severe and fatal malignant sore throat. The chief peculiarity, however, was the tendency in most cases to terminate in glandular swellings or suppurations in the neck, throat, or ears. Another complication or consequence of the disease is dropsical effusion or anasarca, and for which he recommends iodine in the form of solution, recommended by Lugon.—R. Iodin. ℥j; iodic. potassæ, ℥ij; aquæ, ℥vij; M. Flat solutio. Of this solution from five to ten drops for children, and from ten to twenty, or twenty-five to adults, three times a day in water. This treatment was most successful.

VACCINATION.—Medical men who are in the habit of vaccinating the children of the poor must have observed, that the success of the operation is often impeded by the dry and flaccid condition of the skin to which the matter is applied. To remedy this inconvenience M. Hulard, of Rouen, proposes the preliminary application of one or two small cupping-glasses over the part, for the purpose of stimulating its vitality, and affirms that he has had recourse to this method with the best results in a great number of cases.

CAUTERIZATION OF THE NECK OF THE UTERUS.—M. Lisfranc says, that during the last three months of the year 1841, seventy-two cauterizations were performed on eleven women affected with ulceration of the neck of the uterus; in forty-four of these, the nitrate of silver was used, and in thirty-one its employment was followed by a discharge of blood; on the other hand, the deuto-nitrate of mercury was used in twenty-eight cases, and in three only occasioned a slight discharge. This would give a decided advantage to the *deuto-nitrate of mercury* over the hitherto favourite *nitrate silver*.

NEWCASTLE MEDICAL AND SURGICAL SOCIETY.—The eighth anniversary meeting of this valuable institution was held a few nights ago, when a report of the proceeding of the past year was read by Mr. Greenhow, the indefatigable secretary of the society. Its proceedings during the past year have been characterised by more than ordinary interest, both as regards the number of facts and the practical information which have been brought forward at the monthly meetings, and the interesting discussion to which they have given rise. It was the earnest wish of the originators of the institution that it should comprise, in its list of members, the names of all the practitioners in the district, as a means of concentrating professional and scientific information, and promoting social and friendly feeling amongst them; and the desire lately manifested to enter into the society encourages a reasonable hope that the early anticipations of its founders are about to be in a great degree realized. *Floreat res medicæ.*—*Gateshead Observer*. [We cannot too strongly recommend the formation of similar societies throughout the kingdom. There should be one in every district. *Hæc res et jungit, junctos et servat amicos.*]

PHARMACEUTICAL NOTICES.

The Experiments of Dr. Scherer on the Solubility of Fibrin in neutral Salts.—“The experiments of Denis were related partly in his essay, ‘*Sur le Sang Humain*,’ and partly in a letter to Professor Liebig, wherein he says, ‘Pure and white fibrin, which was obtained free from colouring matter, and substances soluble in water by washing, is mixed with a third part of its weight of saltpetre, and well rubbed in a stone mortar with a wooden pestle. As much water is added by degrees as makes about four times the weight of the fibrin used; and afterwards as much caustic potash or soda as makes a fiftieth part by weight. The mixture is then left to itself, at a temperature from 96° to 100° (F.) The proportions of fibrin, saltpetre, water, and potash are these: moist fibrin, 150 parts; water, 270 to 300 parts; saltpetre, 50 parts; caustic potash, 3 parts. Solution is promoted by stirring. The mixture becomes first gelatinous, then viscous, and after some days fluid, and able to be filtered, leaving a very small residue undissolved. The filtered fluid has in every respect the chemical re-actions of albumen. It coagulates by boiling, is precipitated by alcohol, and gives the usual precipitates with corrosive sublimate, acetate of lead, &c., This experiment Dr. Scherer first repeated with mixed arterial and venous blood, obtained from an ox whose throat was cut; but this fibrin was scarcely at all soluble. The fluid containing saltpetre became very slightly clouded when heated. The experiment was repeated with finely powdered fibrin with the same bad result. M. Denis, informed of the failure, sent some pure fibrin, obtained from the coagulated venous blood of a man, and remarked at the same time, that he also had not succeeded in dissolving the fibrin from arterial blood, or that obtained from the crusta inflammatoria of venous blood. The experiment with venous blood was then repeated, and a perfect solution was obtained, which coagulated by boiling, gave a considerable precipitate with spirits of wine, and acted in every respect like albumen.

“The solution can take place without the caustic alkali; only then, as Berzelius has observed, by dilution with much water, a precipitation takes place. But the precipitate does not fall when a little caustic alkali is added to

the solution in saltpetre. Berzelius gives this as a means of distinguishing between albumen or serum of the blood, and a solution of fibrin.

"But in the serum of the blood it is evident that the free alkali present in it is the cause of no precipitation taking place when it is diluted with water; for, if we add to fluid albumen from eggs, or from fresh serum, so much acetic acid as is sufficient to neutralize the free alkali, and then dilute the whole with much water, the fluid becomes turbid, and deposits flakes of albumen. If we pour off the supernatant fluid, and add a little solution of saltpetre, or common salt, to the separated albumen, it is immediately dissolved and is coagulable by heat. Dr. Scherer also remarked, that fibrin, which was long exposed in a moist atmosphere, or which was boiled a few minutes in alcohol, was also insoluble in saltpetre, and it appeared to him that this arose from some action of oxygen on the fibrin.

"Fresh fibrin was placed in a graduated glass tube, with 198 cubic centimeters of oxygen; the day following four cubic centimeters of oxygen had disappeared, the second day six, the third day eight, fifth day ten, the fourteenth day eighteen; caustic potash ley was then thrown into the tub, and fifty cubic centimeters were absorbed. So that in this experiment sixty-eight cubic centimeters of oxygen disappeared, and fifty cubic centimeters of carbonic acid were formed.

"In another experiment two tubes were filled with oxygen, in one fresh fibrin, in the other boiled fibrin was placed; after four days, the tube with unboiled fibrin contained much carbonic acid, whilst that with boiled fibrin contained no trace."

Blistering Plaster. By M. Soubeiran.—According to Dr. Müller, the uncertainty which sometimes attends the effects of blistering plaster, as usually prepared, may be ascribed to the circumstance of the vesicating principle remaining locked up in the tissues of the fly.

In order to obtain a plaster more uniform in its operation, Dr. Müller recommends that the cantharides be left to digest in the plaster, kept fluid at a moderate heat, for five or six hours.

I consider this suggestion of Dr. Müller's a very good one to follow; it nearly corresponds with what M. Guibourt has said on the same subject; but the prolonged digestion of the cantharides ensures the solution of the active principle more effectually than would be the case if they were merely incorporated with the plaster while still hot, according to M. Guibourt's recommendation.—*Journal de Pharmacie*.

ON THE TINCTURA OPII AMMONIATA OF THE EDINBURGH PHARMACOPŒIA.

BY MR. J. H. GILBERT, NOTTINGHAM.

BEING a student in the laboratory of the Glasgow Royal Infirmary during the summer of 1839, it was occasionally my duty to dispense the tinctura opii ammoniata—a preparation, the apparently unchemical composition of which led me to suspect, that, as far as the opium employed is concerned, it could be of no utility; it being well known that ammonia acts as a precipitant to morphia. It is true that a great excess of that alkali will, in some solutions of the salts of morphia, either prevent its precipitation, or re-dissolve it when precipitated. In order, therefore, to ascertain the fact in the present instance, I submitted several separate portions of the tincture to examination at Dr. Thompson's laboratory, where also I was a student.

Two ounces were first boiled in a flask with magnesia; the magnesian precipitate collected and boiled with alcohol; the alcoholic solution filtered while hot, and set aside in a warm situation to evaporate slowly; no crystals were de-

posited, and the residual matter, when tested, was found to contain no morphia.

Four ounces were next treated in a manner varying from the above. The liquid, previous to further treatment, was saturated with dilute acid; for when, as before stated, morphia has been held in solution by an excess of ammonia, I have found, that after expelling the greater part of that excess by gentle heat, and then saturating with dilute acid, a salt may be obtained, from the solution of which the morphia may be separated by the usual means. In the present case, however, no morphia was detected.

Having thus failed to detect that principle in the filtered tincture, the dregs of a known quantity were macerated for some time in water acidulated with muriatic acid; the filtered liquid, after being digested with animal charcoal, was sufficiently concentrated on a water-bath, and set aside, when a large quantity of crystals of muriate of morphia was deposited. A part of these were treated with ammonia, and the morphia tested in a separate with a neutral solution of perchloride of iron; and part, while in the state of muriate, was tested with iodic acid in the usual manner. As the dregs employed were not exhausted, nor the mother-liquor treated with ammonia, an accurate quantitative result could not be obtained; but the amount of muriate of morphia was so great, that it could not fall much short of the average produce of such a quantity of opium.

These experiments I considered as conclusive; but finding the new Edinburgh Pharmacopœia retained the old formula, and that the remarks made on the tincture by various writers on *Materia Medica* and Pharmacy seemed to indicate previous experiment, I feared that either too small a quantity had been experimented upon, or that some source of error had been overlooked. To obviate any such mistake, several portions, each of twelve ounces, were successively examined; in none, however, was morphia detected. As a check to the processes, several portions also of tincture of opium (each of which would contain, by estimate, a quantity of opium equivalent to that in twelve ounces of the ammoniated tincture), were treated in precisely the same modes as the ammoniated tincture had been. In these cases morphia was separated without difficulty, thus proving the efficacy of the processes.

It may be observed, that before any of the tinctures were boiled with magnesia, the greater part of the ammonia and alcohol in the one, and of alcohol in the other, was expelled by gentle heat on the water-bath; as, in some cases, the alcohol in the liquid would be sufficient to take up the morphia after the decomposition of its salts by magnesia. The loss of ammonia caused no deposition of morphia.

These facts seem to show that if, as I believe is universally admitted, the medicinal effects of opium are attributable chiefly, if not entirely, to the morphia which it contains, the opium employed in this tincture might with advantage be omitted.—*Edin. Med. and Surg. Jour.*

PROCESS FOR SEPARATING GOLD FROM PLATINUM.

BY M. KEMP.

M. Kemp has discovered that oxalic acid is capable of reducing gold from its solutions, but exercises no action on platinum. In order to separate these two metals, and determine their proportions, they must first be dissolved in aqua regia: the gold is then to be precipitated in the metallic state by oxalic acid, and the platinum by means of formic acid. The difficulty which has hitherto been experienced in separating gold from platinum, makes this process of considerable importance to the Chemist.

CONCENTRATION OF NITRIC ACID BY MEANS OF SULPHURIC ACID.

BY M. J. PELOUZE.

In distilling nitrate of ammonia with ten times its weight of concentrated sulphuric acid, M. Pelouze observed, that nitric acid was afforded in considerable quantity, which induced him to doubt the correctness of a statement met with in most chemical treatises, that concentrated sulphuric acid decomposes nitric acid into water, with which the sulphuric acid combines, and hyponitrous acid and oxygen gas.

500 parts of highly concentrated sulphuric acid were mixed with 100 parts of nitric acid, of specific gravity 1.448; the mixture was slowly distilled, and afforded 88 parts of nitric acid, of specific gravity 1.520. This product, freed from most of the red vapour by a gentle heat, was mixed with six and a half times its weight of concentrated sulphuric acid, which admixture was unaccompanied by any sensible increase of temperature. The mixture was colourless, and yielded very dense white vapours of nitric acid. When heated to a temperature which never exceeded 302 deg. and was kept as near as possible to 212 deg. 82 parts of nitric acid, of specific gravity 1.520, were distilled, and the boiling point of this acid was from 185 deg. to 188 deg. (Fahr.)

A third rectification with sulphuric acid effected no change in the properties, density, or colour of the nitric acid thus obtained.—*Jour. de Phar.*

MEDICAL NEWS.

MESMERISM.—Liverpool like Manchester promises to be well mesmerized. During the last week, Mon. Lafontaine has given one public lecture, and Mr. Braid two. Both lecturers professed to have effected great improvements in the vision and hearing of patients by their experiments, Lafontaine claiming credit for results which are little short, if at all, of what have been hitherto called miracles. The great novelty in Mr. Braid's second lecture were experiments on the brute creation. The results do not appear to have been perfectly satisfactory. Mr. Braid attributed to mesmerism the power exercised by Van Amburgh over animals, and thought that the perfection of Greek statuary was owing to the steadiness which some such agency gave the sitter, when once placed in a good position. A woman suffering under paralysis of the arm, is stated to have received immediate benefit from the first experiment performed upon her during the lecture. The name and address are published.

ORGANIC PETRIFICATIONS.—A young physician of Rome, says a letter from that city, had succeeded in discovering the means of petrifying all substances of organic formation, without their being changed materially in colour. A few days are sufficient to operate this transformation. He has already exhibited flowers, birds, fishes, and even human heads, beautifully petrified.—*Athenæum*.

Dr. Ayres, of Thame, enters his protest against the way in which the Senate of the University of London announces the annual election of Examiners. He complains that the result is, that nine-tenths of the places are kept filled without the annual re-election which the charter enjoins. Thus this year only two examiner-ships were declared vacant (Dr. Ruget resigned his office, we believe, because he considered 100*l.* per annum too little for the duties he had to perform).

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No. 135. Vol. VI.

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COURSE OF LECTURES ON THE THEORY AND PRACTICE OF MEDICINE,

Delivered by C. J. B. WILLIAMS, M.D., F.R.S., Professor of the Practice of Medicine, and of Clinical Medicine, at University College.

GENTLEMEN,—In the preceding lecture I offered some general remarks, and purpose to make some additional desultory observations in the present lecture, before entering upon the course regularly. It may be generally remarked, that obstruction of the venous circulation, scarlet fever, a thin, poor state of the blood, disease of the kidneys, are the causes of dropsy, and in these complaints the urine is invariably found to be albuminous; the treatment for dropsy from anæmia would be steel and tonics combined. In inflamed states of the blood, it is found to contain more fibrine than in the healthy or normal state; mucus secretion is pale and watery at first, but it afterwards becomes more thick and of a deeper colour; inflammation causes a softening of the mucous membrane. Mucous, serous, and parenchymatous tissues are particularly liable to suppuration; rigors in inflammation are sure indications of the formation of matter; hectic fever always accompanies the suppurative process; œdema is a very common indication of the formation of matter, when deep-seated. When inflammation terminates in gangrene, there is a considerable abatement of the fever, and gangrene may generally be known by the peculiar and offensive smell in the chamber or apartment of the patient. Inflammation is divided into sthenic and asthenic, the former is a healthy process, the latter the reverse. Cullen divides inflammation into the phlegmonous and erysipelatous or erythematic. The latter is less coloured than the former, and is attended with greater prostration of strength, and of a typhoid character. Gouty inflammation differs from rheumatic in being confined to the joints more exclusively, and more especially to the smaller joints; it is generally met with in plethoric individuals and those of a full habit of body, whom you may call free-livers. Gout may always be discerned from rheumatism by the following observations, namely,—the previous dyspeptic symptoms; by the pains in the one disease attacking the smaller, in the other the larger joints; by the peculiar mode of its attack; by its not being preceded by, or accompanied at its commencement with symptoms of synocha, and also by the age of the patient, as it seldom has been found to present itself before the age of *twenty* or after *sixty*. In inflammatory sore throat cayenne gargles are most useful; the nitrate of silver has also been tried and said to be beneficial; it has been long since recommended for inflammation of a purely erysipelatous character, and with decided advantage. In inflammation of the stomach, small pieces of *ice* frequently given and allowed to dissolve in the mouth are most agreeable and serviceable to the patient, so also are draughts of nitre,

&c. Poultices, fomentations, dry cupping, &c., may be considered as derivants. Mercury increases all secretions, and is therefore so useful in croup, and indeed in all diseases of a glandular character; it is not attended with the sedative effects of the *tartrate of antimony*. Resinous purgatives are best adapted for promoting mucous secretions. In erysipelatous inflammation serum is effused, in phlegmonous inflammation lymph is effused. The former, when it attacks internal organs, generally seizes on the peritoneum, as in puerperal fever; it also seizes the larynx occasionally. Scrofulous inflammation generally affects the glands and mucous membranes. There is much less pain and heat in this than in the common inflammation—it renders the body liable to tubercular diseases, especially internally.

In these complaints the skin is either dry and hard, or cold and clammy—suppuration generally produces death from pure exhaustion. In inflammation of serous membranes, mercury is the most successful remedy you can have recourse to; but in mucous and parenchymatous membranes, or tissue, the tartarized antimony has decidedly the best effect, and is the most valuable remedy. Colicium acts on the kidneys, and also occasionally as a purgative; it increases the secretions, and therefore is a most useful remedy in gout and rheumatism. It is sometimes found very useful and most desirable to combine tonics with antiphlogistic remedies. You may always consider cold and wet as the two great exciting causes of scrofula. A liability to catarrhal affections are in a great measure prevented by having recourse to the shower-bath, cold sponging and washing the neck, shoulders, and chest in the mornings. Some diseases would, and are successfully treated by using *these* measures which cause the disease, such as gargling the throat with cold water and salt in inflammatory sore throat. The brain and spinal marrow contain more blood, in proportion to their bulk, than any other parts of the body. Nitric acid, in combination with some other mild tonic, is found to be very useful in cases of mercurial erythema, or even given with mercury in an alterative form, with recourse, perhaps occasionally, to narcotics. Whenever there is a great irritability of the stomach, or tenderness or pressure over the epigastrium, with nausea, &c., tartarized antimony should not be given. Tartar emetic produces, and is followed by a great prostration of strength and vital powers, and, therefore, should be administered with very great caution to children or young people. The extract of taraxacum may be very usefully substituted for mercury in such cases where the latter disagrees; or, indeed, it may sometimes be very properly altered for mercury; like mercury it has a specific action on the liver. Bones become brittle in old age from deficiency of gelatine. They are composed of two substances; the one a cartilaginous basis, or parenchyma, which gives the general form to the part; the other, a peculiar earthy matter, which is deposited in the cartilaginous basis. The fluids in hydatids is found to be perfectly clear and transparent, and the covering or cyst is generally very elastic. These cysts sometimes contain a curdy matter—very often a fluid much like honey, but more commonly a sero-albuminous fluid. It is generally noticed that scirrhus rarely, if ever, attacks persons below forty years of age. Fungus hæmatodes and medullary sarcoma are very vascular; the general difference between scirrhus and sarcoma is, that the former is more frequently attended with pain which is absent in the latter. Melanosis, or blood-cancer, as it is commonly called, is sometimes conjoined with fungus hæmatodes. It is said, on chemical analysis, to consist principally of carbon. The black melanose matter found in the lungs consists almost entirely of car-

bon. In mercurial erythema salines should be given, unless the bowels are very relaxed, and it would in these cases be very desirable to give gargles of the chlorides of soda or of lime. Excessive nutrition is the cause of induration of an organ; malignant diseases are found in various parts of the body at the same time, and are generally followed by intractable ulcers. Tubercles are semi-transparent, grey or pinkish; sometimes they are found in granular masses, and sometimes diffused. Yellow tubercles have been found on mucous surfaces. The hypertrophy in some very vascular parts, from congestion, &c., is the cause of tubercle; also excessive exertion, cachectic, scrofulous diseases, and want of fibrine in the blood, predispose to the formation and development of tubercles. Tubercles are first deposited in granular masses, which afterwards become encysted and retained, and a continual increase is made until they eventually become the size of a pea or cherry-stone. The sabulous deposits uniting at last form one homogenous structure. Tubercles are very prone to inflammation, suppuration, &c., &c. Pure air is the most powerful restorative agent in tubercular and scrofulous diseases, especially sea air; all the medicines likely to promote the secretions, such as iodine, &c., are here specially requisite. All the functions decline on account of the defective arterialization of the blood in the lungs; and unless white meats, jellies, and a light nutritive aliment be allowed, the patient will sink rapidly. Sometimes we discover pulmonary congestion, when a small bleeding or leeching must be employed. Blisters or counter-irritants should on no account be applied over the part inflamed, but somewhere in the neighbourhood of the internal organ engaged in the inflammation. Removal to a warm climate, or to the more temperate parts of our own country, moderate exercise, either by swinging, horse-riding, or by sailing, carefully guarding against a suppression of cutaneous perspiration, in consequence of the application of cold, by constantly wearing flannel next to the skin. Syncope may arise in two ways, from hæmorrhage and from asthenia, or debility from whatever cause induced. In nervous irritation counter-irritants are especially useful—viz., sinapisms, blisters, turpentine applications, &c. Narcotics only stop the nervous part of inflammation, or rather nervous irritation; the blood is not driven from the inflamed part by the use of a narcotic treatment. Larger quantities of blood may be taken from the body in disease, unless disease previously existed, so as to cause anæmia, than in a healthy state of the body. Mercury has the tendency to increase considerably the lymphatic and intestinal secretions; but you must always bear in mind that it is inadmissible in phagadenic ulcers, where you must have recourse to a more general plan of treatment, such as sarsaparilla, a nutritious regimen, &c. Tartar-emetie is especially useful in inflammatory diseases, except those cases in which they may be of a long standing—then you must have recourse to more active and specific agents. The distinction between pus and mucus is as follows:—The former is opaque, friable, easily miscible with water, of a fœtid odour, of greater specific gravity than water, sinking to the bottom of the vessel containing this fluid. Its colour is either white, yellow, or green; when dissolved in sulphuric acid, if water be added it either falls to the bottom, or forms an intricate mixture, making the whole uniformly turbid. The latter is transparent, viscid, not miscible with water, inodorous; upon adding water to its solution in sulphuric acid, it separates into flocculi, and floats upon the surface. A sputum, which answers to all the characters of pus, is occasionally expectorated from an inflamed state of the mucous membrane of the air-passages, and from other conditions not attended by ulceration. Regular tu-

bercular phthisis usually begins with a short dry cough, so slight as to become habitual before it excites the attention of the patient. Hectic fever is not an infallible sign of phthisis; recovery may happen though this be present.

In detecting diseases, we must carefully examine all the regions of the body, and every organ and function in particular. This examination is accomplished by the aid of the senses, of vision, hearing, taste, smell, and by the use of certain instruments, namely, the stethoscope and pleximeter; what makes a good pleximeter occasionally, is a *flat piece* of whale-bone, covered with leather on one side—or the hand will often answer your purpose in this respect. Our primary object is to discover whether the disease be merely a disorder of function, or a lesion of structure; whether it be purely nervous, or dependent on increased vascular action, arising from congestion, inflammation, or the consequences of this last. It is of the utmost importance to determine the nature of the disease; for if functional, the treatment will be totally different from that requisite for structural, and *vice versa*. In many instances we cannot form a correct diagnosis; in many it is impossible; and in several cases we have to treat combinations of both species of disease as the same, a complication which forms decidedly the most difficult part of the practice of medicine. Signs or morbid indications afforded by the senses.—A brilliant sparkling eye indicates disease of the brain, either in the idiopathic or symptomatic form. When the eye is dull, disturbed, haggard, or expresses fury or fright, it is an unfavourable sign, and often announces the approach of death. Deafness in acute diseases indicates serious disease in the brain or ear. Loss of smell and taste are presumptive signs of more or less irritation in the stomach. Loss of touch announces disease of the brain, and of the prostration of the vital powers. The splendid discovery of *Laennec* has led to a ready diagnosis in diseases of the chest. The crepitating r le occurs in the first stage of pneumonia and œdema. The mucous r le is characteristic of catarrh; the sputa may be opaque, transparent, viscid, or puriform, colourless or greenish yellow. In some cases the face is congested; there is great dyspnoea without disease of the heart, the fine extremities of the bronchi being filled with mucus. When the sputa are round and opaque with white streaks, and there is pectoriloquy, phthisis is indicated. Pneumonia exists when the sound is dull, the sputa are viscid and tinged with blood, the respiration is incomplete, the crepitating r le is present; these symptoms leave no doubt, though no pain is felt.

In pleuritis the pain is acute, the respiratory murmur cannot be perceived by auscultation, and there is egophony. The metallic tinkling proves the existence of effusion into the pleura, or hydrothorax with a fistulous communication into the bronchi. When the nostrils are impervious, we may suspect catarrh, ozena, or secondary syphilis. The voice is guttural in cynanche tonsillar. A flapping sound in the trachea may be caused by inflammation of the epiglottis, though it may occur in phthisis, unpreceded by any sign of laryngeal inflammation. Pectoriloquy is a sign of the last stage of phthisis. Percussion, mensuration, and succussion or shaking the body, assist us in our diagnosis of chest diseases. During healthy respiration in adults, inspiration and expiration succeed each other with regularity. There are from fifteen to twenty respirations in a minute, but more in women, weak individuals, and children. Respiration is effected by the intercostal and other inspiratory muscles in health, and is called thoracic, or by the diaphragm alone, as in fevers, and near the approach of death, when it is called abdominal. Respiration undergoes the same alterations as the pulse. It may be frequent (respiratio-frequens) when it exceeds the natural number, or rare (res rara) when it is slower. It is frequent in all febrile diseases, in *verminous* affections, as well as in pulmonary affections or diseases.

STIMULANT APPLICATION FOR ULCERS.—Sir B. Brodie recommends the following prescription, as an application to indolent ulcers:—R. Balsam peruvian, 3grs.; vitellori, 3j. Mft. Linimentum.

LECTURES ON CHEMISTRY.

By JOHN SCOFFERN, Esq., Lecturer on Chemistry at the Aldersgate School of Medicine.

It is rather unfortunate for the interests of science, that we are obliged to recognise in the language of common intercourse, terms which when examined with philosophic scrutiny are found to be incorrect. It is moreover unfortunate, that however sensible we may be of the fact alluded to,—however desirous of speaking and writing in terms of less ambiguous meaning, yet so pertinaciously do our ideas cling to the images of their association, so impatient do they become of the trammels which philosophy would impose, that whatever we gain in precision by the introduction of new terms, we lose in facility of adaptation. After all that has been said by chemists, with a view of distinguishing between the terms heat and temperature, I own that the ideas thus called unwillingly up, appear (to me at least) very little at their ease, and remind me very much of certain spirits, which as fairy tales report, have been dragged by the power of magicians from their calm abodes to perform some arduous task. Obedient to the wand of the enchanter they have come, and being constrained have performed that which was required, but claiming no alliance with the feelings of their task-masters, and feeling impatient of restraint, have glided suddenly away again. Well, in the present instance, I repeat, that despite all the refinements of chemistry, and its striving for precision,—the ideas attached to heat and temperature will mutually identify themselves, except we remain continually on the watch. I do not imagine that the distinction will be more perfectly accomplished by the introduction of any new terms whatsoever, and therefore have already objected to the term *caloric*. It has been my endeavour to make the distinction more marked by treating the effects of latent heat as distinctly as possible from those of evident heat or temperature; but this morning I shall have to speak of certain phenomena, involving them both;—I purpose treating in this lecture of heat as an antagonist to cohesion, and in using the term heat thus, without specifying whether it be latent or evident, I may be considered open to the charge of want of precision, but the omission is unavoidable. That solids become liquids, and the latter vapours or gases by an accession of temperature or evident heat, is a well-established fact; consequently we may assert without any doubt whatsoever, that *temperature is an antagonist to cohesion*. That during the change, of solids into liquids and of liquids into gases, a great deal of temperature is lost or rather disappears, and becomes latent, is also a fact, but we cannot tell whether this disappearance be the cause of change of form, or whether change of form be the cause of this disappearance; therefore we are not in a position to affirm whether latent heat diminishes cohesion or not. This fact I already mentioned to you in my first lecture on heat. I stated that Dr. Black attributed the phenomena of liquefaction and vaporization to a combination of substances with specific or latent heat, regarding an absorption of the latter as a *cause* of these changes; whereas Dr. Irvine imagined this absorption as only a casual result, omitting to assign any cause whatsoever.

It is often necessary, for the purpose of philosophic inquiry, to imagine conditions which are known to be impossible, and to speculate on the consequences that would have probably flown from them. Let us imagine, then, all heat, both sensible and insensible, to be annihilated, and the force of cohesion to exert its full play. Under those conditions we have every reason to believe that all substances in nature would have been solids. Now, let us imagine heat to have been created in an evident form, and to have begun to exert its influence on the solid world. Acting as an antagonist to cohesion, it would have begun to separate the particles of bodies from each other; a portion would still have remained appreciable as temperature; another portion would have become dormant, still, however, not much; at length, temperature still increasing, the solid body would have liquefied:—and now we must suppose to have taken place the first *great* disappearance of evident

heat, or temperature,—we must suppose it to have become hidden or latent, constituting the heat of fluidity, but whether the cause or the effect of fluidity, still to be determined. Proceeding with our supposition, we will imagine the liquid thus formed to continue acquiring a further accession of temperature, and to continue expanding; at length it would burst into a vaporous or gaseous state, a large quantity of evident heat or temperature again becoming latent or concealed. Cohesive force would here have been diminished to its furthest limits; therefore the train of our speculations is at an end.

All this is hypothetical; we have assumed conditions which are impossible; we cannot deprive any substance whatever of heat altogether, but after approaching to those conditions as nearly as we can, such are the inferences we must necessarily deduce.

Although a solid body begins to suffer a diminution of its cohesion even on the first application of temperature, yet connected with this diminution there are two states, besides that of solid, both characterized by the amount of cohesion existing between particles; I mean the conditions of liquid and vapour or gas; between the two last terms there is no essential difference whatsoever, consequently they are synonymous. These two states, and more particularly the phenomena attendant on their assumption, I now purpose examining; first of all let us direct our attention to the state of fluidity.

Most solids may be converted into fluids; all may be regarded as capable of this change, under certain conditions which are easily indicated, if not always easily fulfilled; and the most striking peculiarities in connexion with this change of state is the invariable temperature at which it takes place, for the same substance. Solid water *i. e.* ice, always melts at a temperature of 32 deg. F. *exactly*; and all other solids possess a melting point just as invariable; this is a fact not more curious than important, enabling us as it does to apply fixed temperatures, and to obtain unchanging points of graduation. Before entering more fully into a description of the phenomena attendant upon liquefaction, let me caution you against being misled by popular terms, into a habit of imagining unphilosophic distinctions and refinements. In this instance I allude to a false idea which might naturally arise in your minds dependent upon a popular understanding of the words *freezing* and *thawing*, the former being exclusively applied in ordinary language to the solidification of liquids, attended with such a diminution of temperature as produces the sensation of cold, and the latter to the melting of such solidified bodies. Now this is unphilosophical; if it be proved (as is the case), that whenever any liquid, no matter what, assumes the solid state, without the influence of mixture and chemical action, temperature is lost or rather disappears in a latent form; then whether the amount, thus disappearing, be capable, or on the contrary of imparting a sensation of cold, still no positive and essential difference will exist, but merely one of degree. Remember, then, that in every case where a fluid becomes solid, independent of chemical action, temperature always disappears, so that there exists no *specific* difference between the change of liquid iron into solid iron, liquid tallow into solid tallow, and liquid water into solid water.

Although this disappearance of temperature be invariable, it nevertheless differs remarkably in various bodies; for example, the amount of temperature which disappears during the conversion of water into ice is sufficient to raise the temperature of an equal quantity of liquid water by 140 deg.; the amount of temperature which disappears during the conversion of liquid sulphur into solid sulphur, would have raised the temperature of an equal quantity of liquid sulphur by 144 degrees, or an equal quantity of water by 87.14. The following table affords a more concise exposition of this fact, and also extends our illustrations:—

Latent heat of	Measured by itself	Measured by water.
Water	140	140
Sulphur	144	27.14
Lead	370	11.0

Zinc493.....48.3
Bismuth550.....23.25

From this table you will observe how greatly water exceeds the other bodies there mentioned in the amount of temperature rendered latent during the act of its solidification. This remark not only applies to water in connexion with bodies mentioned in the table, but to all others, and is productive of the most important results. Were it not for this enormous quantity of evident heat rendered latent during the conversion of ice into water, and given out under the reverse conditions, the change of seasons would have been so rapid, as to subvert the whole economy of nature. Suppose, for example, that water passed from 32 to 31, and became solid by losing only the same quantity of heat as it gives out in cooling from 33 deg. to 32, the change of seasons, instead of being characterized by those beautiful gradations which they now present, would have been rapid, inimical to health, and wanting in many of the requisites necessary to vegetation; the most rapid streams might have been frozen in one night, and thawed in a period no less short; the disasters arising from such conditions as these must have been greater than we are prepared fully to contemplate.

It would be inferred by reasoning *a priori* that liquids should expand in assuming the liquid from the solid state, inasmuch as fluids have less cohesion than solids, and as cohesion depends on proximity of particles. Generally the result is as theory would indicate, but not invariably so; for example, water during freezing expands with enormous force; cast iron, antimony, and bismuth, during solidification, also expand a great deal; hence an alloy of the two latter metals is much used for printers' types, and stereotype plates; during solidification their expansive property enables them to assume the exact form of moulds into which they are cast, and thus most accurate impressions result. You will remember that all those bodies assume well-marked crystalline forms, and hence their being affected by heat contrary to the general rule may admit of a rational explanation; for even granting that cohesion depends on proximity of particles, we may easily imagine the latter to be disintegrated, and yet to occupy less space than when they were more perfectly united to each other. Such instances of the contraction of bodies by the application of heat are not difficult to explain, but water begins to contract even before it is cooled to the freezing point, *i.e.*, 32 degrees. This change indeed commences at a temperature between 39 degrees and 40 degrees, and is usually explained on the supposition that the particles of water assume a kind of crystalline arrangement before they take on the absolute solid form. We have hitherto failed to recognise any distinct evidence of temperature, *considered apart from other agencies*, producing contraction; surely we must not cite in favour of such a doctrine the instances just alluded to and presented during the change of certain solids into liquids. The apparent contraction here is easily referable to a loss of crystalline arrangement; and as for the contraction experienced by hydrate of alumina or clay, a property that was taken advantage of by Wedgwood in the formation of his pyrometer, it is doubtless owing to a loss of water.

The phenomenon of increase of bulk accompanying the conversion of water into ice, is so subservient to important purposes in the economy of nature, that I must allude to it again. Increase of bulk without increase of matter is of course the same thing as diminution of specific gravity; in other words, ice must be necessarily lighter than water from which it was produced; hence it floats on the surface, instead of sinking to the bottom as it otherwise would. I need scarcely remind you of the fearful consequences that must necessarily have followed, had the reverse of those conditions been obtained. Had the specific gravity of ice been greater than that of liquid water, it would have sunk far too deep for the sun's rays to melt; each winter would have accumulated fresh masses; the most rapid streams would in process of time have become solid, and with rolling their icy masses in winter towards the hottest regions of the globe, at depths too great for the sun's rays to melt, we should have been enveloped before long in masses of eternal ice.

By mixing with water certain salts, the freezing point of the former is considerably lowered: every person is aware of the fact that sea water in our latitudes does not freeze, and in polar regions when ice is formed the salts are not at first included in the mass.

I have already alluded to the means employed for producing cold artificially; they have reference to the principle of latent heat. Freezing mixtures consist of easily deliquescent salts, which, to be in conformity with other substances capable of assuming the liquid state, absorb during this change a great quantity of evident heat, or temperature; this, of course, must be abstracted from surrounding bodies, and hence cold results. Thus, when nitrate of ammonia is mixed with an equal weight of water, the thermometer sinks 46 degrees; and carbonate and sulphate of soda dissolved in three times their weight of water, reduce the temperature, the first 16 degrees, and the second 12 degrees.

Sometimes those soluble substances are formed artificially by double decomposition, and then the cold produced is greater still. Thus, neither nitre nor sal-ammoniac produces much cold, but when mixed they generate nitrate of ammonia, which is very powerful, and hence cause a reduction of 40 degrees. In other cases the cold results from a quantity of water of crystallization being set free and suddenly liquefying. Thus, when crystallized bi-sulphate of soda is dissolved in muriatic acid, there are formed bi-sulphate of soda, and chloride of sodium, with which but one-fifth of water remains; and the remaining four-fifths being disengaged and abstracted from the surrounding bodies, the necessary heat for liquefaction, the temperature becomes depressed below 50 degrees. Freezing mixtures of still greater *potency* may be formed by using snow or pounded ice. The cold is greatest when the salt itself contains a great quantity of water in a combined form. Chloride of calcium in crystals, for example, contains half its weight of water, and when mixed with an equal weight of snow, the whole becomes liquid; of course much evident heat becomes latent, and hence the cold which results. When the maximum of cold is derived, the ingredients of one freezing mixture must be cooled by another; thus Mr. Walker succeeded in depriving the temperature to 91 degrees of Fahrenheit. The accompanying table shows the composition of the chief frigorific mixtures:—

Frigorific Mixtures without Ice.			
Mixtures.	Parts.	Therm. sinks.	Deg. of cold.
Nitrate of ammonia.....	1	from +50° to +4°	.46°
Water.....	1		
Muriate of ammonia....	5		
Nitrate of potash.....	5	from +50° to +10°	.40°
Water.....	16		
Sulphate of soda.....	3		
Dilute nitric acid.....	2	from +50° to +3°	.53°
Sulphate of soda.....	6		
Muriate of ammonia....	4		
Nitrate of potash.....	2	from +50° to +10°	.60°
Dilute nitric acid.....	4		
Sulphate of soda.....	6		
Nitrate of ammonia....	5	from +50° to -14°	.64°
Dilute nitric acid.....	4		
Sulphate of soda.....	8		
Muriatic acid.....	5	from +50° to 0°	.50°
Phosphate of soda.....	5		
Nitrate of ammonia....	3		
Dilute nitric acid.....	4	from 0° to -34°	.34°
Nitrate of ammonia....	3		
Dilute nitric acid.....	4		

Frigorific Mixtures with Ice.			
Mixtures.	Parts.	Therm. sinks.	Deg. of cold.
Snow or pounded ice....	2	to -5°	.. *
Common salt.....	2		
Snow, &c.....	5		
Common salt.....	2	to -12°	.. *
Sal-ammoniac.....	1		
Snow, &c.....	24		
Common salt.....	10	to -18°	.. *
Sal-ammoniac.....	5		
Nitrate of potash.....	5		
Snow, &c.....	12	to -25°	.. *
Common salt.....	5		
Nitrate of ammonia....	5		
Snow.....	7	from +32° to -30°	.60°
Dilute nitric acid.....	4		
Snow.....	2		
Chrys. chlor. of calcium..	3	from +32° to -50°	.82°
Snow.....	3		
Potash.....	4		
Snow.....	3	from 0° to -46°	.46°
Dilute nitric acid.....	2		
Snow.....	1		
Chrys. chlor. of calcium..	2	from 0° to -66°	.66°
Snow.....	8		
Dilute sulphuric acid....	10		

COURSE OF CLINICAL LECTURES ON PNEUMONIA.

Delivered at the Hospital La Charité, by Professor CHOMEL.

COMMENCEMENT, PROGRESS, DURATION, TERMINATIONS, CRISES, SECONDARY PHENOMENA, AND DECLINE OF ACUTE PNEUMONIA.

HAVING considered separately each of the various symptoms of pneumonia, we must now class them together according to their order of succession in the different stages of the disease; begging the reader, however, to bear in mind, that when treating of these symptoms, I at the same time indicated with considerable care the period of their commencement, as well as duration. These are, however, points to which we must return when speaking of the influence of a judicious treatment, especially an antiphlogistic one, over this malady.

I. *Commencement.*—It is important to fix with precision the commencement of pneumonia; this knowledge is in fact indispensable to enable us to appreciate the progress, the duration, and the critical phenomena of the disease, and consequently to guide us in our prognosis and treatment. It is, generally speaking, an easy thing to ascertain the appearance of the disease, for it almost always commences suddenly by a shivering fit of some intensity; still there are cases in which it is difficult to discover this point, where, for instance, pneumonia succeeds a bronchitis; frequently in these cases we find neither a premonitory shivering fit nor pleuritic pain. The difficulty also becomes much greater when pneumonia supervenes in the course of typhoid fever, or in individuals greatly debilitated, whether from age, from some chronic disease, or from any other cause; then often we have no phenomenon announcing the invasion of the disease, which may, without attention, remain completely latent. The acute pneumonia of adults most usually commences by a *shivering fit* of some intensity, which is quickly followed by pain in the side. Sometimes this latter symptom precedes the shivering fit, and at other times both these phenomena appear together. In a certain number of cases, pneumonia commences with cough, oppression, and fever, without these symptoms being preceded by shivering or pain in the side. Sometimes the individual is attacked with the disease while in full health, as most commonly occurs; at other times, though more rarely, the patient, before presenting the characters of pneumonia, is affected for some days with lassitude, uneasiness, loss of appetite, and sometimes with true *inflammatory fever*. M. Andral has especially directed the attention of the profession to this latter mode of commencement, which might obscure the pneumonia. Unless the expectoration be characteristic, and auscultation be had recourse to, our mistake in these cases will be the more probable, as the cough is frequently very slight, and the patient does not complain of oppression; and even should these symptoms become aggravated, the physician might attribute them to the accelerated state of the circulation. When pneumonia commences during the night, the premonitory shivering is almost always absent, and the attack is directly indicated by a burning heat, dyspnoea, cough, and pain in the side. Very often, also, this disease supervenes during the early days of an attack of acute pulmonary catarrh. When a second attack is developed during the course of the original pneumonia, its invasion is most commonly indicated merely by the greater intensity of the dyspnoea and acceleration of the pulse; but sometimes shivering and pain in the side occur, as at the commencement of the first attack. Among the local phenomena which precede the invasion of pneumonia, there are some which are referable to acute congestion of the lung, and of which I shall speak when considering the diagnosis of the disease.

II. *Progress.*—Sometimes the inflammation at its first onset attacks a portion of the lung, and remains confined to this point, but most commonly it extends itself to the surrounding parts, like those diseases commonly called *spreading*; this progress is particularly observed when pneumonia is combined with bronchitis. The extension takes place more or less rapidly, and most frequently is announced by no appreciable physical sign; in the same way, as in erysipelas, the skin bordering on that which

is the actual seat of the disease, is in no way modified, either in its sensibility, its volume, or its colour, and yet in a few hours it may be invaded by the inflammation. M. Grisolles, however, asserts his having been able in some patients to diagnose beforehand, and even to fix exact limits to the points of the lung which would be invaded at the end of six or twelve hours. He recognises the inflammation to be gradually spreading, when there exists around the diseased part a more or less circumscribed point in which the respiratory murmur has lost its force and purity. For this sign to possess any value, it is requisite that the feebleness of respiration be limited to a small space. Percussion in this case furnishes no result. It is probable that this weakness of the respiratory murmur is indicative of the first stage of sanguineous congestion. Inflammation is not freely declared till crepitation supervenes. We shall see, when treating of the differential diagnosis, that active congestion of the lung precedes pneumonia, and that by recognising its characters in the region bordering on that which is inflamed, we may indicate with some precision how far the inflammation tends to invade the already diseased organ. When pneumonia is double, the inflammation does not attack both lungs at the first onset; it commences in but one, and then, after a few days, attacks the other lung, in which it acquires a less degree of intensity: if the first lung be in a state of grey hepatization, the other presents merely red hepatization, or a state of engorgement only. The passage from the first to the second degree is rapidly accomplished; thus it is rare in the hospitals to meet with cases of pneumonia unattended by bronchial respiration; there are some practitioners who have never observed the absence of this symptom. According to the report of M. Grisolles, but eight patients out of fifty, in whom two days and a half or three days had elapsed since the commencement of the pneumonia, presented crepitation alone; beyond the fourth day there was constantly found crepitant râle mixed with bronchial respiration; and in two patients bronchial respiration was met with even within twenty-four hours from the commencement of the disease. The passage from the second to the third degree is announced by no *positive* sign; we can never more than *suspect* grey hepatization, it is impossible to announce it in a positive manner. This form of hepatization, in some cases, supervenes in a very rapid manner, more especially in *puerperal* pneumonia. A lady, whom I was requested to see, had a favourable confinement; the next day, she laboured under a slight indisposition, which was not considered of any consequence by the medical man; but when called in during the course of the day, I was astonished to find dulness on percussion, together with bronchial respiration over the whole of one side of the chest. Twelve hours afterwards she died; and at the opening of the body, we found the lung in a state of red and grey hepatization. M. Andral saw a case of pneumonia which in forty-eight hours passed through its three stages; this affection appeared at first of but little consequence, when suddenly is assumed an exceedingly rapid course and carried off the patient. On the other hand, the disease sometimes retrogrades with extreme rapidity; I have seen a perfect state of resolution brought about in three or four days; I shall say more on this point, when speaking of the influence of certain kinds of treatment over the progress and duration of the disease.

Pneumonia, like all other acute diseases, presents a period of febrile *accession*, a *stationary* period, followed by one of *decline* and periodical *paroxysms*. The paroxysms usually take place at night, the fever then becomes more intense, the pain more acute, the cough more frequent, the respiration more difficult, the expectoration less copious and not so easily detached, but which becomes redder and more abundant towards the decline of the attack. In some cases the fever assumes a perfectly remittent character. A remarkable remission, also, frequently occurs on one of the days between the third and seventh of the first week; but this is frequently deceptive; the inflammation re-appears with as great violence as before, and the existence of the patient is again compromised. I

shall hereafter speak of the intermittent form of pneumonia.

Duration.—The ordinary duration of acute pneumonia is from seven to twenty days; it is rare to find it less than seven or over twenty. Laënnec thinks that, excluding the complications of this disease, we may in general fix in the following manner the duration of each of the stages of pneumonia. *Engorgement* usually lasts from twelve hours to three days before passing into a perfect state of hepatization. Hepatization continues two or three days before any point of purulent infiltration exhibits itself; and lastly, the period of suppuration, from the moment when concrete purulent infiltration is perfectly distinguishable up to that stage where the pus is converted into a viscid liquid, varies from two to six days. We see, then, according to Laënnec, that the minimum duration of the three stages of pneumonia is four days and a half, and the maximum twelve days.

IV. Terminations.—1. Pneumonia may terminate by death in any of its stages. I have seen a fatal termination during the period of *engorgement*, in which a very large surface of the lungs was affected.

2. When pneumonia, not having reached the second stage, terminates by *resolution*, the pain in the side diminishes, the respiration becomes more free, the expectoration less red, not so viscid, and more abundant, the respiratory murmur stronger in the affected points, the crepitant râle more humid and more remote. The frequency of the pulse diminishes, and sometimes what are called critical signs take place by perspiration, by urine, by stool, or by other ways. If the pneumonia has reached the second stage, the crepitant râle which had disappeared is again heard, but with new characters (*rhoncus crepitans redux*), and is quickly transformed into a mucous râle. The respiratory bruit reappears and becomes more and more distinct. The dulness on percussion gradually diminishes, and eventually disappears; the expectoration becomes of a lighter colour and less viscid, the cough not so frequent, the dyspnoea less urgent, the fever abates, the features assume a better expression, and convalescence commences.

3. I shall defer speaking of *suppuration* of the lung till I come to the diagnosis of the different stages of pneumonia.

4. When *gangrene* follows inflammation of the lung, in addition to the ordinary symptoms of reaction and the characteristic expectoration, we find the following phenomena: an extreme prostration of the powers of life more or less rapidly supervenes, the features become greatly altered and frequently covered with a livid *pallor*, the pulse becomes small, very quick, and often irregular and unequal; the *sputa* are of a greyish green colour, and in like manner as the breath and perspiration, give forth a *characteristic faecal*; auscultation discovers most of the signs of purulent cavities within the lung, but the resonance of the voice in the gangrenous excavations is clearer as well as stronger than in the cavities induced by suppuration; nor do we hear that kind of *undulatory* sound which sometimes exists in pulmonary abscess. Gangrene of the lung progresses with extreme rapidity, and generally causes death in the space of a few days. It very rarely becomes cured. I shall not dwell any longer upon this form of disease, for it is uncommon to meet with it as the result of pneumonia; but I cannot terminate this short description, without relating the following case which, to my knowledge, is the only one in which have been noted all the details furnished by auscultation from the first appearance of the gangrene up to its termination by resolution.

Some days before the manifestation of the characteristic odour of the sputa and the general symptoms of gangrene, we ascertained all the signs of the most marked active congestion of the lungs. The symptoms were seated at the middle third of the posterior part of the right lung. Some traces of sonorous and sibilant râle showed themselves, and when the general symptoms of gangrene and the foetid odour of the sputa appeared, the signs of congestion had extended much beyond their

original limits, and at the same time upon the surface where they had appeared, or where they still preserved their maximum of intensity, the viscous humid râle was greatly augmented; the mucous bubbles became larger, moister, and more numerous; the bronchophony was more marked on a level with this part, and sonorous and sibilant râles mixed with the mucous râle were heard on the fore part of the same side of the chest, but scarcely at all on the opposite one. The symptoms remained almost the same, so that the foetid odour of the sputa, which was of a very marked character, as well as the brownish-red colour of the expectoration, and the general state of the patient led us to suppose the continuance of the gangrene, the signs of which, however, in a short time, disappeared, and with them, gradually and slowly, all the local symptoms which have been noticed, and which in their decline followed a similar course to that observed in the termination by resolution of active congestion of the lungs.

5. Does pneumonia ever terminate suddenly (*by delitescence*)? Such a result, we may imagine, can only take place before the disease has passed its first stage; for the lesions which characterize the second, and especially the third stage are of too grave a nature to disappear in a few seconds. Besides, in those very rare cases in which authors have remarked the *delitescence* of pneumonia, some new affection has always supervened in an equally sudden manner; thus, in a case observed by M. Fouquier, the pneumonia, after resisting all antiphlogistic means, suddenly disappeared on the same day that some rheumatic pains became developed in the lower limbs, and afterwards in the upper ones. In the following case, the pneumonia having reached the second stage, disappeared in thirty-six hours. The patient was attacked with well-marked pneumonia of the left side, which had reached the stage of hepatization. This disease presented a remarkable degree of intensity for a period of two or three days, when it suddenly declined on the appearance of an attack of Indian or spasmodic cholera, in which the stools were less copious than the vomitings. All the symptoms of the pulmonary affection, says M. Fouquier, disappeared in less than thirty-six hours from the supervention of the cholera, during which large quantities of liquid matter were evacuated from the stomach and bowels.

6. Lastly, acute pneumonia in some cases passes into the *chronic state* (see chronic pneumonia.) Thus, we see, pneumonia offers several modes of termination, among which we may enumerate the transformation of one form of the disease into other forms of a still graver character, as for instance, the gangrenous and the chronic states.

V. Crises of acute pneumonia.—A *crisis* is a phenomenon announcing a marked and decided tendency towards cure. Hippocrates, Galen, Stahl, Hoffmann, Sydenham, Boerhaave, &c., as well as many modern authors, have admitted the existence of crises which however have been doubted by some physicians. If this had always been considered as a question to be resolved by observation and by facts alone, we should undoubtedly at the present day possess ample and valuable materials on this subject, but, unfortunately, instead of having recourse to simple observation, many authors have lost themselves in theories often obscure, so that a vast and important deficiency exists in this respect in the history of diseases, and especially in that of pneumonia. Even in the present age, observers absorbed in the study of pathological anatomy and the symptoms of diseases seem to have considered the question of crises as superfluous; still it is undoubtedly of great importance both with respect to prognosis and treatment.

Do we not sometimes see phenomena arise in the course of acute pneumonia, which as it were prognosticate the course of the disease, and deserve the appellation of crises? This question may certainly be answered in the affirmative, based as it is upon the assertions of several of our most justly celebrated ancient authors, as well as upon various observations collected in the present day. In pneumonia, according to M. Andral, critical phenomena are observed perhaps more frequently than

any other disease. But these cases are certainly more rare than some authors appear to believe; for instance, not one of the 50 patients, whose history has been so carefully collected by M. Grisolle, presented any critical phenomena either by urine, by diarrhoea, or by hæmorrhage. We may, however, remark that the urine was not subjected to the researches since instituted with such success by M. Martin-Solon, and of which I shall speak presently. Before proceeding to the consideration of the principal critical phenomena observed in the course of pneumonia, I must remind you that it has been generally remarked that it is at that moment when the symptoms of disease have acquired their highest degree of intensity that these appearances manifest themselves; thus, when expecting these critical phenomena, we ought to be prepared to treat very quickly and energetically the exasperation which is one of their principal elements. With respect to the precise period at which the crisis takes place, a knowledge of which might serve to render clearer the course to be pursued in the treatment of the disease, we possess no data to be relied upon. It has been said, it is true, that the critical days *par excellence* are the 3rd, the 7th, the 14th, and the 20th; but, in this respect as in many others, more numerous and better authenticated facts are required to ensure our belief. The various critical phenomena noticed in pneumonia, are presented, 1st, by the urine, 2ndly by the perspiration, 3rdly by the expectoration, 4thly by the stools, 5thly by various hæmorrhages, 6thly by different exanthemata, abscesses, &c.

1. Critical Urines.—In peripneumonia as in most acute diseases, the urine becomes limpid and colourless at a certain period, then thick and high-coloured, and lastly, it becomes cloudy and throws down a sediment. The old physicians studied with a care and perseverance worthy of praise these different phenomena, especially with a view towards the prognosis of the disease; and to show only some of the principal results which they attained, we find Lieutaud declaring, from his own observations and those of several of his predecessors, that peripneumonia sometimes terminates on the 7th, the 9th, or the 11th day of the disease, by the secretion of urine which deposits a whitish and thick sediment. According to other authors the critical urines deposit a very abundant ash-coloured and furfuraceous sediment; sometimes they become thick a short time after the patient has voided them, and resemble whey mixed with ashes. Towards the 7th, the 9th, the 11th, the 14th, or any other intermediate day, says P. Frank, the whole body sometimes becomes covered with an abundant and vapoury perspiration; at the same time a copious homogeneous and periform sediment is deposited in the urine. M. Frank speaks also to having seen the urine when devoid of sediment, but very abundant, being as much as a gallon and a half or more in the day, dissipate in peripneumonia, especially when of a rheumatic character. Unfortunately in the midst of assertions which the experience of the present day shows to contain some truth, we find so much exaggeration and error, that the study of the urine, in the prognosis of disease, had fallen into entire disavow, and was almost completely abandoned, when lately M. Martin-Solon has anew directed the attention of practitioners to the phenomena presented by this liquid on the decline of acute diseases. It is especially in peripneumonia, intermittent fever, the acute exanthemata, and typhoid fever, that M. Martin-Solon has noticed, or the turn of these diseases, the urine to be sometimes coagulable by heat and nitric acid, and sometimes by acid and not by heat; the same observation has been made in some isolated cases of acute peritonitis, hepatitis, nephritis, and articular rheumatism. I will first explain to you the process by means of which these precipitates are obtained; and then consider whether these deposits really present the critical characters, and if they are not liable to be confounded with other alterations of the urine.

A. For the purpose of discovering the critical urines, M. Martin-Solon takes the fluid excreted in the morning in a glass; in important cases he also examines the excretion during the day as well as the night; after having ascertained its phys-

ical properties as to colour, transparency, density, opacity, &c., he examines by means of re-agents whether the urine be acid, alkaline, or neutral; if transparent, he then adds a few drops of nitric acid; and should a cloudiness result, he regards the urine as *critical*, and exposes it to the action of heat. If this cloudy formation become redissolved, the urine is said to be capable of *precipitation or coagulation by nitric acid*; if not redissolved, he heats in a small tube, by the flame of a spirit-lamp, another portion of the urine. Should this become coagulated, he classes it among the *critical albuminous urines*, or those *coagulable by heat*. When the urine is thick and high coloured, he also adds a little nitric acid. If it become clear, he considers it as not critical; but if the opacity, far from disappearing, become increased by the formation of a cloud, which is dissipated or not by caloric, the urine is regarded as *critical*; and as a still further precaution, a portion of the urine is to be filtered, and then treated in a similar manner; the results will be the same, and the urine is to be classed accordingly. The critical urines owe one of their principal properties, that of coagulating by heat, to albumen; this peculiarity existed in eleven cases out of seventy-eight. The property of precipitation by nitric acid, possessed by critical urine, M. Martin-Solon believes to be attributable to the presence of an excess of urea, uric acid, and urate of ammonia; the precipitate is formed not of mucus, but of urate of ammonia; the cause of its formation is, however, still unknown.

B. By adopting the above-mentioned proceedings, M. Martin-Solon has studied the properties of the urine in a great number of individuals affected with acute and chronic diseases; and confining ourselves simply to pleuro-pneumonia, we shall see that the urine of twenty-four patients labouring under this affection, examined carefully every day and at different periods of the disease, presented, in twenty-two cases at least, an abundant coagulation. Of these twenty-two cases, the urine was only twice coagulable by heat; in the twenty others, on the addition of nitric acid, the urine threw down a precipitate, which was re-dissolved on the application of heat. Among the interesting cases recorded by M. Martin-Solon in his memoir, I shall instance but two; the one relates to an intense pleuro-pneumonia, which was complicated successively with gastro-enteritis, incipient meningitis, and slight erysipelas of the face: these affections were successfully treated by free venesection. The increase or gradual disappearance of the albuminous coagula in the urine coincided sufficiently with the accession or diminution of the inflammatory affections, to render clear the diagnosis, and especially the prognosis of the disease. The second case referred to a pleuro-pneumonia of the right side, which had existed three days, and had reached the second stage when the patient entered the hospital; under the influence of one copious blood-letting, (to a pound and a half), the symptoms improved from the following day, and on this day also the urine gave an abundant precipitate on the addition of nitric acid. M. Martin-Solon considers the coagulability of the urine as a critical sign. In seventeen cases of peripneumonia, the power of coagulation or precipitation in the liquid was well marked at the turn of the disease only; in the earlier periods it was either absent or very slight, but always ceased towards the period of convalescence. In pneumonia, as in typhoid fever, this critical phenomenon occurs at various periods, from the first to the fourth week. Thus, in a patient in whom the disease was checked, this phenomenon was manifested on the fifth day, while it did not become evident till the twenty-fifth in another patient in whom the disease was prolonged by the successive appearance of various inflammatory affections.

C. The critical urines must not be confounded with the coagulable urine observed in the disease described by Bright. In both forms, it is true, this liquid owes to albumen alone its property of coagulating on the application of heat; but in several respects, it differs essentially in the two cases. The critical albuminous urine is very rarely sanguinolent; but it is very different with the urine in Bright's disease. The critical urine

is most frequently of a deep colour, while in Bright's disease this liquid is usually pale or very slightly coloured. In the former case it exhales a very strong odour, especially when heated; in the latter it is almost inodorous. The density of the critical urine is almost always greater than in the natural state, while in Bright's disease it is almost always less. In the former case, the coagulum is more often suspended than precipitated, whilst, in the latter, it is usually thrown down. The critical urine never becomes coagulated *en masse* by the action of re-agents, while this phenomenon is not uncommon in the urine of individuals labouring under Bright's disease. All the constituent principles of the urine, urea, uric acid, urate of ammonia, &c., are found in critical urine, frequently even in exaggerated proportions; whilst in Bright's disease, they are diminished in quantity, and sometimes are entirely absent. On the other hand, critical urine attended by precipitation differs essentially from thick and coloured urine; inasmuch as the latter, far from giving a precipitate with nitric acid, is rendered clear by the action of this re-agent. It is true that, in seventeen cases of pleuro-pneumonia pointed out by M. Martin-Solon, this muddy state of the urine was combined with coagulability; but the latter quality is always a much better indication of the turn of the disease than the former; for it is only when the urine ceases to be thick, that the critical precipitation shows itself. I may add, that the urine frequently presents a precipitation without having been at all muddy.

M. Martin-Solon concludes from his observations, 1st.—That the urine becomes coagulable by heat, or presents a precipitation on the addition of nitric acid, during the course of acute diseases; 2ndly, That this phenomenon is sometimes manifested at uncertain periods, but then it is usually slight; 3rdly, That in some cases this phenomenon does not take place, and still the disease may terminate in a perfectly favourable manner. 4thly, That it generally presents itself towards the critical period of acute affections, and announces a favourable termination.

I shall conclude these considerations by observing, that the characters pointed out by M. Martin-Solon in critical urines, are much superior to those which have been previously noticed in this liquid. These characters may be easily ascertained at the bed-side of the patient; as it merely requires a bottle of nitric acid, a few glass tubes, and a spirit-lamp. There is, however, ample room for further researches on this subject, which might greatly contribute to clear up the prognosis, as well as the treatment of pneumonia.

ROYAL COLLEGE OF PHYSICIANS.

Wednesday, March 3, 1842.

LECTURES ON MATERIA MEDICA, NO. V. BY DR. ROUPELL.

Dr. R. said, that the common herb "Paris" was the next on Dr. Burgess's list of medical plants. The root of this herb was recommended by Linnaeus as a substitute for ipecacuanha. It would appear to be a mild emetic, and hence might be useful in cases of dysentery, for which we find it employed. No remedies, indeed, give greater relief in certain cases of inflammation of mucous membranes, either of the abdomen or chest, than those which occasion vomiting. The efficacy of the Paris quadrifolia in hydrophobia, epilepsy, and convulsions, diseases in which it was formerly used, would be much more problematical. The etymology of this plant seems clearly derivable "a *paritate foliorum*." A mistranslation of the Latin word "paris," and an erroneous reference to the fabled history of "Paris," may have given rise to our trivial English name. In connection with the history of this root, it may be remarked that errors are perpetually handed down by receiving the statements of others without scrutiny; thus MM. Dobel and Pena consider that we have here an antidote to corrosive sublimate and arsenic, to obviate the

fatal effects of which poisons it cannot be too often repeated we only can rely on albumen and the hydrated oxide of iron.

The reputation which the root of the parsnip has acquired as a remedy for intermittents must forcibly impress upon us the conviction that attacks of this fever may spontaneously subside. A substance possessing less activity could in truth scarcely have been selected as a remedy. Fecula and sugar, its chief constituents, would render it more serviceable in consumption and irritability of the bladder, for which disorders it has been highly extolled. The name, *Pastinaca*, is derived from the resemblance of this root to the "pastinum," a forked tool anciently employed for planting. There can be no doubt that the serious accidents supposed to have resulted from eating this root must have arisen from the substitution of other varieties of the umbelliferæ for the one now under consideration.

The Pefauline root, the garden viper's grass, or *Scorzonera Hispanica*, obtained great celebrity at one period as an antidote to the poison of the viper. One of its names is taken from a snake called in Spanish *scurzon*. This esculent was first known in Spain in the beginning of the 16th century, when a Moor, who was supposed to have learnt its virtues in Africa, is reported to have cured a great number of peasants bitten by snakes when mowing. His secret was detected by watching him when in search of this remedy. Peter Cannizer transmitted the plant, together with a drawing of it, to Melchir, physician to the Queen of Bohemia, and she forwarded it to Matthioli. A tract was soon after published by Monardes, eulogising it highly as a counter-poison to the bite of a viper. It was introduced into our country in 1576. Its reputation as an antidote has long been destroyed, but it has scarcely yet attained the place it deserves as an agreeable vegetable.

Gerrarde, in his herbal, mentions 115 plants as possessing diuretic properties. Amongst these he places the common parsley. This he says is "singular good to take away stoppings, and to provoke urine, which it does notably perform." According to the observation of this author, it would appear that the commonest effect of vegetables upon the system is to increase the action of the kidneys; readily as these organs act in health, to stimulate them in disease is one of the most difficult objects to achieve; this is illustrated in some forms of dropsy, when an increase in their secretion would tend most materially to relieve the system. Often must those who relied upon books for directing their treatment, and who have referred to the authority of Gerrarde and others, been disappointed in the result of their remedial means in this particular.

The plantago, the neg-bread or common great plantain, is regarded by the vulgar as a medicinal plant. The leaves are used as a vulnerary, and applied to fresh wounds and cutaneous sores. The seeds are mucilaginous, and in so far as are calculated to be advantageous in hemoptysis and phthisical complaints, for which it is properly used. Dr. Burgess has placed the root in his list, and Bergius maintains that it may be employed with benefit in intermittent fever. We have thus another example of the ready credulity with which ignorance invests inert plants with imaginary power. Not only, however, has the plantago been employed in ague, but it also obtained great credit as an antidote to that almost universal source of alarm, the poison of serpents. We have, in this instance, one of an infinite number of proofs that even communities or bodies of men may be deceived by what is called experience. The common great plantain was the antidote which a Negro of the name of Cæsar succeeded in making the as-

sembly of South Carolina believe to be of such sovereign efficacy as to be worthy of a reward, which they voted him. It is scarcely necessary to add, that the plant is valueless, and the error lies in mistaking a recovery for a cure. The perpetual reference to the poison of snakes, and the general adoption of that reptile as one of the insignia of physic, may justify a brief recital of the history of serpent-worship. Almost all religions, indeed, employ the serpent, either emblematically, or as an object of real veneration, and the terms applied to it were synonymous with those of the ancient mythological divinities. Thus the Greek *Opsis* was a name given to Apollo or Python, and it would appear that there was a legend on this subject at Colchis, and at Thebes, as well as at Delphi. In Egypt, the serpent was sacred, and known by various appellations, eph, or oph, or ob. The Basilisk was the royal serpent, and we retained the term "obelisk," and apply it still to pillars or lofty pieces of stone formerly raised in honour of this object of veneration. It is conjectured that the Æthiopians were so called from "ath opes," the serpent, their divinity, and that they first brought into Egypt the religious respect paid to this animal; and we know that, independently of the frequent introduction of the serpent as symbolical of the sun's course and of the universe, it was embalmed and held to be sacred. This worship afterwards appeared in the islands of the Ægean sea, first at Eubæa or Oubaia, which literally means serpent island. It was difficult to say where and when this superstition took its rise. The Chaldeans, who built the city of Ophis, on the Tigris, were especially impressed with the divinity of these reptiles. This idea would thus appear to be one of the earliest impressions on the human mind, and it is probable that the terror of their venom in the first place rendered snakes objects of dread, and the profoundly ignorant would be prone to regard with superstitious awe whatever powerfully affected the imagination. The supposed origin of diseases in the use of the ancient deities, and especially of Apollo, to whom the serpent was dedicated, would connect this symbol with our art, and it would belong by inheritance to Æsculapius, who was supposed by the Romans occasionally to assume this form, and to have done so, A. U. C. 462, when he freed the city of Rome from a pestilence which raged during that year.

Which of the varieties of rhubarb is the true officinal plant as yet remains in obscurity. We cannot doubt that particular kinds are selected by the cultivators for use, from the accurate correspondence of the samples brought into market. Of the eighteen species already described, the *Rheum palmatum* approaches nearest to the best kinds imported. M. Sievers, by the command of Catherine II., devoted four years to the investigation of the subject, and at the end of this time came to the conclusion that no one yet knew the true sort. Nor have the labours of Professors Royle, Hope, Wallich, or Bouhaarr, been more successful. Dr. Burgess, it would seem, had originally collected 16 specimens, a few only remain, and those almost destroyed by insects. One of the boxes in which the samples in our museum are kept, is labelled R. Monarchorum, and it was my hope to have been able to exhibit a sample of the white or imperial rhubarb; but this specimen has shared the fate of most of the others. The kinds employed are the Russian, the Chinese, the Dutch trimmed (brought from Batavia), and the English trimmed, and in stick. The Russian is known to be the best; the English is the most inferior, but is largely used mixed with the other varieties. The ordinary properties are too familiar to us to need repetition. We are told

by some practitioners that this root in mass is much more efficient as an aperient than when exhibited in the form of powder; if so, we might usefully employ the turning-lathe in the manufacture of rhubarb pills. The quantity of oxalic acid which this root contains renders it objectionable in the oxalic acid diathesis, and gives colour to the popular notion that rhubarb is injurious in diseases of the kidney. Jalap, rarely met with and seldom employed, is nevertheless nutritious, and the product of the root of a plant indigenous in our own country, the orchis mesculæ. It forms a considerable part of the sustenance of the people in Turkey, Persia, and Syria, and is recommended by Dr. Perceval as a remedy in diarrhœa, dysentery, strangury, and gravel. It appears in the form of hard oval pieces, rather larger than a horsebean, without smell, having a taste somewhat like tragacanth. It is said to contain the largest proportion of nourishment in the smallest space. The name is derived from the Greek *orchis*, and has reference to the testicular shape of the root. Many of the orchideæ are very singular and curious, and highly prized and admired for their beauty. Jalap, it may be added, has been vaunted as likely to be useful at sea from its disguising the taste of sea water; and Dr. Perceval mentions a fact connected with this root, which is deserving of notice, namely, that mixed with flour and made into bread it greatly increases the weight of the product. One ounce of the powder of the orchis dissolved in a quart of water and mixed with 2lbs of flour, 2 ounces of yeast, and 80 grains of salt, yielded a loaf, well-tasted and fermented, weighing 3lbs. 2ozs. A loaf made of the same materials and in the same quantities, with the exception of the jalap, weighed only 2lbs. 12ozs., so that by this addition six ounces were gained. This is not peculiar to the orchis, the disagreeable taste of which would render it objectionable, but is common to many substances, perhaps to all the modifications of ferule and gum. The increase in weight of bread thus manufactured must be by absorption of more water, and the retention of it after baking.

It was remarked upon the subject of the sarsaparilla, or more correctly of the smilax, and in reply to those who doubt the utility of this remedy, that many morbid states of the body could be corrected by certain vegetable juices. Their utility on board ship would be readily admitted. In what instances, it was asked, do we find our diet drinks serviceable? If not in actual scurvy in those cases, at any rate where there is a sponginess of the gums, in the corysipelatous inflammation, on that ulcerated state of soft parts with laxity of the fibres which supervenes upon long and severe courses of mercury, a condition which, if not perfectly analogous to sea scurvy, may be considered as in some degree parallel to it. A fine collection of all known varieties of the smilax root with smilacine, one of its principles, was then exhibited.

The Museum of Materia Medica at this College contains a specimen of the root of the saponaria officinalis. This was one of the ancient substitutes for soap, and is still used in the province of La Mancha, in Spain, and in the Helvetian Alps. In common with many other vegetables it contains principles which lactify by tincturation with water; on effect due to the admixture of mucilage with resin. We are told by Lucan that the saponaria was chewed by those who feigned epilepsy in order to produce foam in the mouth.

Seillitin, the active principle of the squills, has now been procured in a state of great purity; there is, however, no very manifest practical benefit in thus separating it. We em-

ploy the root of the *s. maritima* as a diuretic or emetic. As much as the stomach will bear without nausea may readily be given in the form of a pill, so that there is no advantage in reducing the bulk when we wish it to act as a diuretic, and it is not requisite to put an emetic into any very small compass. It is now the custom to import the squill in a dried form, as the duty upon it is the same in its prepared as in its natural state. We are losers by this, as much is brought into this country from the Levant very imperfectly or carelessly dried.

The beneficial employment of valerian in the case of the distinguished botanist, F. Columna, greatly added to the celebrity of valerian as a remedy for epilepsy. Tissot declares, indeed, that if it does not yield to this treatment, it is incurable. We rarely use it as Massius advises us, in the form of bath, though he quotes many cases in which advantage resulted from this plan. Serviceable as the root of valerian is in some forms of convulsive and hysterical affections in epilepsy, when confirmed, he can in general anticipate no certain alleviation from any regimen, medicinal or dietetical. The lecturer related one fortunate exception to ordinary rules in these cases, that—viz., of a gentleman who from the time that he was forty years of age to sixty, was frequently and severely attacked; from sixty to eighty he continued absolutely free, and remained in the full possession of his faculties till within a few days of his dissolution. MM. de Candolle, Don-Roxburgh, and Jones, consider the valerian jatamansi to be the spikenard of the ancients, the celebrated ointment of which contained the balm of giliad, myrrh, animum, costus, and other fragrant herbs.

The last topic mentioned this evening, was a root not to be found in the list of plants collected by Dr. Burgess—the piper methysticum, or ava. A beautiful drawing of the plant was exhibited, and several specimens of the dried root were on the table. These were of various sizes—some, that of the fore-arm, contorted with a dark epidermis, yellowish within, presenting the appearance of fibres radiating from a centre. It contains piperine, some of which principle obtained from this plant was showed round. This exhibited in doses of a grain, is capable of checking the paroxysms of intermittent fevers. The ava is cultivated in most of the Islands of the South Pacific, with the view of preparing from it an intoxicating beverage, to which Capt. Cook constantly alludes in his voyages. He describes, as Constable does also in his Miscellany, the disgusting process by which it is made—the mastication of the fresh root by a number of persons, who spit out the juice, mingled with saliva, into bowls; when a sufficient quantity has been made, it is all collected; it rapidly ferments, and without further purification, is ready for use. The habit of indulging in this luxury produces a disorder of the skin, occasioning disquamation. This, instead of being an objection, is shown with exultation, as indicative of the quality of the individual thus characterised. The drink made in this way is recommended in syphilis; and some of the seamen on board our ships, who tried the remedy, were willing enough to maintain its efficacy.

Mr. Clark then notified that the hour had expired; and Dr. Roupell announced that his course would conclude on the occasion of their next meeting.

HOMŒOPATHY.

THE doctrine of Hahnemann may be considered as hitherto almost entirely unknown in this country. It has been partially discussed and expounded,

but the object of its expositions has been generally to denounce it, and to turn it into ridicule as a system of quackery, or at all events as opposed to every acknowledged principle of rational therapeutics. It has been likewise denounced in France, and the Academy of Medicine at Paris, in a meeting especially convened to examine it, decreed that it was so contrary to truth and common sense, that it did not even deserve to be passed through the ordeal of experiment. These recriminations, however, at least on the continent, have had the effect rather of accelerating than of checking its progress. If it is really based upon no solid foundation, if it is a mere ephemeral hallucination of ignorant enthusiasts, the best possible way to put an end to it is to subject it to a fair inquiry, to analyze its pretensions, and to scrutinize its facts fully and openly in the sight of the medical world. If, on the other hand, it is supported, either wholly or in part, by truth and the testimony of experience, all attempts at opposition are ultimately sure to prove abortive; the more it is persecuted, the more certain it is to extend its dogmas and the boundaries of its practice.

The system of homœopathy is based upon the maxim that *similia similibus curantur*, importing that pathological conditions even removed by remedies which have themselves the property of inducing, in the physiological state, a train of symptoms similar or analogous to those very conditions. It is necessary that this definition should be clearly understood, for a misapprehension on this point has been the cause of much unmerited outcry against homœopathy. When it is said that diseases are cured by remedies which themselves produce like diseases, there is evidently a very forcible reason to withhold immediate acquiescence in such a proposition. This would be tantamount to saying, that intoxication could be cured by a draught of alcohol, a burn by the application of fire, poisoning by a dose of the same poison, &c. But the truth is, homœopathy does not pretend that the effects of therapeutic agents in the economy are of identically the same nature with those of the morbid principle which exist there already. If such were the case, the administration of medicines would have no other result than increasing instead of diminishing the intensity of the malady, which, of course, must necessarily terminate in death. Homœopathy merely asserts that remedies, in order to be efficacious, must operate by an elective and co-ordinate agency, that is, they must produce in the physiological state a modification in the tissues or organs, which will develop a complex of phenomena bearing the greatest possible resemblance to those which are observed in the disease. They must operate, in fact, by a specific action, being carried directly by an unknown affinity or natural attraction to the particular organs or opponents which are affected, and there produce a peculiar disturbance of the functions, which in a state of health gives rise to symptoms analogous to those of the disease, and in a state of disease, is not superadded to the disturbance already existing, but assists in making the reactive powers of nature, which alone are capable of restoring the system to its physiological condition.

The homœopathic doctrine, though it may be extended and more fully developed by inductive reasoning, is essentially based upon experiments; it aims at propounding nothing which is not thoroughly verified by facts. Everybody knows that quinine has a specific effect in the cure of intermittent fever. Homœopathy declares that this substance being administered to persons in a state of health, will produce a *periodical* train of phenomena in every respect resembling those of the fever. Sulphur is a specific remedy in psoric affections. Homœopathy refers to hundreds of experiments, which prove that this mineral being administered in a healthy state, will produce a condition in the economy, which is manifested by cutaneous eruptions, in every respect resembling those of the itch. In like manner, all other therapeutic substances which are employed *specifically* in the cure of disease, have been found to possess the property of modifying the healthy condition of the body in such a way as to create a complex of symptoms in every respect resembling those of the particular disease against which they have a spe-

cific action. This principle being once adopted as a medical axiom, it is clear that a path is opened which may lead to the most important results. By trying, varying, and repeating experiments upon persons in health with the numberless substances in nature, we can observe the real actions of these substances on the economy, uncomplicated by any foreign pathological disturbances, and, therefore, being acquainted with the phenomena which they produce, we may always administer them with confidence, when similar phenomena are presented by disease. A number of substances experimented in this manner, and arranged according to their therapeutic properties, constitutes the homœopathic materia medica; it comprises an immense body of powerful agents, some of which have been long in general use, and the rest have at least the plea of analogy, not to mention the testimony of Hahnemann and his partisans, to recommend them to the attention of medical practitioners. Nature is simple and unique in all her ways; if in many instances, remedies act according to the homœopathic law, there is, at least, some ground to conjecture that this law may be universal in medicine.

An erroneous notion has very extensively prevailed respecting the *modus operandi* of therapeutic agents. It has been supposed that these agents effect a cure by neutralizing the morbid principle of the disease. Now, the existence of such a morbid principle is often a mere hypothetical assumption, as in the whole class of febrile and neuralgic affection; and besides, a disease is neither a physical nor a chemical, but essentially a vital phenomenon; the therapeutic agent must, therefore, operate by modifying the vital powers of the constitution. The disease embarrasses these powers by throwing the organic functions into disorder; the remedy promotes a cure, not by arresting the progress of this disorder in the sense of an antidote, but merely by calling the resources of nature into active energy. There is no such thing as a *healing* remedy in the literal sense of the term; the restoration of health is effected solely and exclusively by the physiological re-action of nature herself. Homœopathy declares that the object of its medicines is to excite this vital reaction, without attempting to countervail the force of any morbid principle that may exist in the economy, and that for this purpose those remedies are most efficacious which have been found by experience to possess the greatest power of disturbing the dynamic laws of the constitution in those very organs or systems where the presence of the disease is manifested. It must not be imagined that a therapeutic agent operates in a manner *friendly* to health; to act advantageously it must display even a greater hostility to health than the very disease which it is intended to eradicate. It does not enter into the body as an ally of nature to assist her in expelling a foreign enemy, but it is itself an enemy, and merely serves to excite and provoke the energies of nature, which by that means is enabled to drive from her territory both the original foe (the malady) and the new disturber (the therapeutic agent.) Such, then, is a simple statement of Hahnemann's law of similars. In a future number we may give some account of the mode of preparing homœopathic medicaments, and of that fatal stumbling-block in the way of the homœopathic system, the question of infinitesimal doses.

CAMBRENSIS.

[Our correspondent begins with this paper a series of interesting articles, descriptive of the various medical systems which are being raised on the Continent. Though he does not give in his adhesion to any of the outré opinions on which he so philosophically treats—we yet wish it to be understood that the opinions he announces are *his* not ours.]

LETTERS OF LINNÆUS.—At Vienna is announced the publication of 93 hitherto unpublished letters of Linnæus, ranging from the years 1759 to 1777, and containing, it is said, many impartial scientific facts, as well as a number of curious details relating to the private life of the great naturalist.

TO CORRESPONDENTS.

X. C. makes known to us a grievance of which he and his brother students of University College think they have a right to complain. On the resignation of the late Dr. Davis, the students of the class of midwifery petitioned for the appointment of his son, Dr. J. H. Davis, to finish his father's course. The council appointed Dr. Reid. On the election of the Professor, the class unanimously petitioned for the continuance in the chair of Dr. Reid. The council appointed Dr. Murphy, formerly a lecturer at an institution in Dublin. Our Correspondent chagrined at this "contempt" of his class, seems very anxious for a scholastic emolument, an anxiety we can in no way lend ourselves to gratify. We readily admit that the expression of the opinion and wishes of a body of pupils ought always to secure for itself courteous consideration on the part of inferiors; but we cannot go so far as to say that it should be absolute; and it should be recollected that in their last recommendation the students forfeited (deservedly we think) much of the weight they would probably otherwise have had by their versatile abandonment of their earlier favourite—for in acknowledging that their first wishes were injudicious, they, of course, threw doubt on the wisdom of their second. If the council were under any suspicion of intrigue—or personal interestedness—we should feel more inclined to canvass their adverse decision; but it appears they overlooked the gentlemen who were likely to have private influence with them, and appointed a total stranger. Unless a different state of things be represented to us, our advice will be gentlemanly acquiescence in what appears to have been a very honest election. The students of the class, as they applauded the council's choice when opposed to theirs in preferring Dr. Reid to Dr. Davis, may possibly find cause to prefer its choice also in preferring Dr. Murphy to Dr. Reid. We say this, however, without wishing, or indeed being yet able to express any opinion of the relative merits of the parties.

A Constant Reader informs us that we misunderstood the tenor of his observations in reference to the admission of gentlemen in practice to the College of Surgeons and Hall, and that he perfectly agrees with us in the sentiments we last week expressed on the subject. We believe we spoke the opinion of the profession, and it would be very satisfactory to us to find that the corporate bodies referred to would act on the important suggestion.

Mr. H. M., Mitis, a Natural Physician, Mr. D. G., Dr. W., declined.—A natural physician is surely a natural-born fool. Dr. Ratcliffe, when asked to advise for an absent shoemaker, on the evidence of his water which was before him, sent a sample of his own in return, and requested to be measured from that for a pair of boots. In a similar spirit, we have just to ask what other profession or trade a natural physician thinks he could fill without education? Could he make boots, repair watches, build houses? If such things have difficulty, how much more the craft of the physician.

Will Zeno put himself in communication with the sub-editor?

Various communications are under notice.

We have some more additions to our list of quacks. We hope to announce shortly the precise day of publishing them. In the mean time we solicit our friends' assistance in ferretting out the interlopers. No journal has ever undertaken so onerous and useful a duty before. It is surely not asking too much to expect from our friends, that they will take a little trouble to let us know the unqualified. Anonymous informants are again begged to give their names in confidence.

Our brilliant correspondent, Probe, will next week pencil out for our readers a family group of some of the principal lecturers of St. Bartholomew's.

No. 33 is now ready. Vol. 5, containing the world of medicine from October to April, is now ready, price 7s. 6d.

THE MEDICAL TIMES.

SATURDAY, APRIL 23, 1842.

Dicite Pontifices in sacro quid facit aurum.

PERS.

ONE of the most interesting passages of history, are the scattered chapters in which Sallust relates the fair promises, the sham concessions, the specious negotiations, and other plausible artifices by which Jugurtha retained his usurped empire, when time after time it had seemed irrevocably lost in open warfare. The College of Physicians are adepts in the science of the Numidian Prince. After many a shameful discomfiture suffered in their scurvy conflicts with their excluded members—after the solemn sentence of deposition pronounced long since against them by the voice of public opinion, expressed through its organs, the House of Commons and the public press—they yet continue to perpetuate their baleful sway, and manage, by their adroit tactics, to drag on a tortuous existence months and years after the time which every circumstance which can assure men of certitude, had prefixed as the sure period of their extinction.

The philosophic historian, if our memory serve us, intimates an opinion that nothing but the total ruin of the fratricidal Numidian could atone to men or Gods for the past flagitiousness of his life. The records left us of the doings of the Royal College almost tempt us to express a similar opinion. Dr. Elliotson, when publicly examined in 1834 by the parliamentary committee, emphatically declared that the system of policy which had been pursued by the fellows was BARBAROUS, and the only objection to the term that now on cool reflection occurs to us, is, that it conveys a slander on a less culpable portion of our species. That flagrant opposition to the most obvious teachings of natural reason, and the commonest notions of honesty which characterizes the bye-laws and statutes of the self-elected junto—the still more flagrant vices—above all, the hideous spirit of individual persecution, shamelessly exhibited in the administration of those laws and statutes, are peculiarities not to be reached by a people whose selfishness has not been made acute by refinement. There is comparative mercy in the tomahawk or scalping-knife of the Indian; the lingering tortures invented by a Dionysius or a Halford, belong to the genius of a more civilized people.

For more than two hundred years has this College stood out before the public as one of the grossest anomalies of a most anomalous time! Where was there ever a corporate body that so entirely departed from both the letter and spirit of its foundation charter to pursue the road of deterioration? The objects of the College—if any aim at

all can be attributed to the founders,—was, after protecting the public from a bad quality of drugs, to segregate into one honoured body the educated profession; and by a just and proper inquiry into diplomas, to secure at once the competency and respectability of its members. How have the aims of the founders been realized? By the production of the very opposite results. Founded in charity, the College has been governed by selfishness; established in justice, it has been directed by fraud; a national institution, it has been perverted into a petty private partnership. Where in Theophrastus or Shakspeare is there a more singular phase of selfish human character displayed than in the exclusion of the learned body of licentiates? Equals by birth, by education, by all that can make one gentleman another's fellow,—pronounced free and integral members of the body by every word of the charter, and of the early statutes which carries with it sensible meaning; they have yet for years been ignominiously treated as exiles in their own land, serfs in their own domain, with no other pretext to justify the barbarous mal-treatment, than that they had derived their education from a source different from that of their persecutors. The pretext is contemptible, but the cause concealed under it is atrocious. The object, the clear object was increase of official distinction, and the consequent increase of practice and emoluments.

Posterity will never speak of the College as it has come down to us, save in tones of mingled horror and wonder. Casting their glance at the important period of its foundation, they will paint the broad feelings of benevolence in which it originated, dwell on the noble mission it was capable of fulfilling in pure hands, the checks it could have imposed on murderous empiricism, the aid it could have given to legitimate science, the feeling of brotherhood it might have awakened, the spirit of enquiry it might have kindled, its excitation of thought, its stimulus to genius, its concentration of intellect, its diffusion of knowledge acquired, its acquisition of knowledge unknown, and thus conjuring up the phantom of an excellence that might have been,—will present the world with the loathsome figure of the flagitiousness that has been—a body of mercenary speculators banded together in perpetuity of renewed injustice, making their meals on the intellects and hearts of those whom nature placed above, as a bad fate placed below them, limiting the number of the feeders to admit of larger divisions of the spoil, and only partially abandoning their propensities when abandoned by the power of gratifying them!

But if in by-gone days the College has been out of proportion with the time it lived in—backward as was that time—and still more out of proportion with the rules of justice, there has been a great improvement of late. Granted; but the times have marched quicker than the fellows. The

concessions which would have been justice fifty years ago, are mere trifling now. The fluctuating tide of events has made larger changes than they have dreamed on. That which would have been high-water mark years ago will strand the boat now. The question has ceased to be between the fellows and licentiates; it is now between the fellows and the whole profession, the profession too, not of a province, but of the empire. The Doctors are an increasing body, springing from a hundred different sources, and we think we see signs in the future that they will aspire, and not vainly, not only to the honour of membership, but to the more valued privilege of a share in the government. We await time: meanwhile, the more complete justice the fellows do their licentiates, the better for their bankrupt finances, and the better for their future strength.

THE BEARDED WOMAN.

ONE of those aberrations of design, or sports of nature, vulgarly designated *hermaphrodites*, is now exhibiting in the Strand, and as such a phenomenon rarely appears, and seldom has been the product of our island, we visited it twice, not only with a view to satisfy ourselves that there was no deception in the case, but to lay before our readers the results and impressions of our visits.

On entering the room, at the extreme end to the left of the fire-place, partially hid from the spectator by a screen, the "phenomenon of the female sex" as it is called in the hand-bill, is observed, raised upon a sort of couch, so as to be rather above the level of the eye, dressed in that histrionic style, which from the remotest periods has been appropriated to that class of beings. The first impression is that of repugnance. Conceive a creature, of the shape and make of man, in the generic sense—four feet high, with a black and flowing beard six inches long; moustachios; a swarthy skin, roman nose, sharp twinkling eyes, and a white hat and feathers on its head! The dress is a frock of white calico, somewhat short; its arms are bared to the shoulder, and its feminine ankles and feet are slender, and cased in sandals. So far then it is a monstrous caricature of a girl of six or eight years old, with a mask upon its face. But if you speak to this being in its native language, the French, you will find that it is intelligent, conversible, and understands its true position as respects the social scale—in other words, it knows and feels that it is beyond the sphere of its influence. Nothing can be more deplorable than this condition of existence. It experiences all the feelings and passions of woman, yet its swarthy skin and bearded chin repel and disgust. To the opposite sex it is a horror and a terror.

Shut out thus from humanity and those pleasing and pleasurable emotions which are the lot of our common nature, debarred from earning its daily bread by manual exertion, and precluded from attracting the attention of the dissolute and the dissipated by its hybrid position, what wonder is it that the characteristics of that sex to which it fondly clings as a unit, should be lost in the exposure of a public exhibition! But our present object is not to speculate in a moral point of view on the anomalous link which it occupies in the chain of human nature, but to describe its physical and anatomical peculiarities.

We will begin with the head. On taking off the hat, we are surprised to find the cranium bare to the occiput, and the skull itself that of a man of fifty, rather well-formed, and what might be called a "good head." The forehead is wrinkled, and it requires an effort of the mind to convince oneself that it is not a male dwarf, dressed like a girl to deceive the visitor. But the doubt begins to give way as we descend in the inquiry, and the veritable bosom of a female of about fifty years is perceived, but of a form and colour by no means inviting. The nipples are dark and sunk in the gland, and the circumference of that globular body is ill-defined and deficient in outline. From the shoulder to the elbow, the similarity to the female is preserved—but from the elbow to the hand, we have the squareness and muscularity of the male! Strange freak of nature thus to unite two opposites in a manner so whimsical. To render the contrast still stronger, the fore-arm, like that of a sturdy man, is clothed with hair! From the chest to the navel and downwards to the pubis the female sex again takes the lead, and the lower part of the abdomen is literally covered with hair, which to a certain extent is continued down to the knee. On examining the pudendum, by dilating the thighs, the clitoris is observed hanging loosely between the folds of the labia, about three or three inches and a half in length, and covered by a true foreskin, but imperforate, and (as we were informed) un-erectile. When lifted up towards the abdomen, so as to present its under surface, it is found to be encroached upon by the labia on both sides, so as to form a hollow or trough (sulcus?) which presents a raw and rose-coloured surface. On allowing it to fall again *in situ*, it exactly represents the penis of a boy of fourteen or fifteen years of age. Immediately below it, is what should have been the vagina, but is the *meatus urinarius*. It appears to be sufficiently large to admit the introduction of a common writing quill, but it objected on our first visit to allow us to make the attempt. The nymphæ appear merged into the labia, at least from the awkward position in which it stood during the examinations we are disposed to think so. When the vulva was closed, the mons veneris, &c., presented the outer configuration of a masculine woman. From the hips, which are those of a man, the male sex resumes itself, till it reaches the knee, when it again abandons its empire to the outlines of the female; and the calf, ankle, and foot are well formed, and those of a woman of five feet six or seven.

This singular freak of nature is a native of Barcelonette, in the Lower Alps, and is thirty years of age, and, as before said, four feet in height. Its health is indifferent; at times it suffers great pain on both sides, along and just over the region of the ovaria, and is then compelled to lie down. Its appetite is variable and small, and its digestion weak and irregular. At times it is excited by the emotions of love, but it has never been able to gratify that passion. It entertains no fondness for its *soi-disant* sex, but is fond of the society of men, and is rational and affectionate in its intercourse with them. Its birth, parentage, history, and mode of living, invite the attention of physiologists; and to students who have acquired a thorough knowledge of anatomy and physiology, it offers an opportunity of no ordinary kind, to investigate and explore the laws which govern the physical economy of the reproductive organs, and the connection which exists between the phenomena of menstruation and those pains which this unfortunate creature feels so frequently in the region of the ovaria.

E. B.

EXTRACTS FROM FOREIGN JOURNALS.

[For the Medical Times.]

AMERICAN.

Treatment of Inflammation of the Testicle by Compression.—It appears that the late Dr. Physick had been accustomed to employ gradually increased pressure to the testicle, in inflammation of that organ, for the last forty years. The following case, among several others, we quote from the records of the Pennsylvania Hospital:—William Albertson, admitted April 27, 1811, with swelled testicle, which had resisted the various applications that had been made previous to his admission. On examination, his testicle was found considerably enlarged; this was attended with violent pain, and a considerable degree of fever. He was put on the antiphlogistic regimen, and was bled and purged; emetics were given, and a blister applied to the part, without occasioning much reduction of the swelling, notwithstanding the inflammation had considerably abated.

On the 15th of May, a slight pressure was applied, and daily increased as the patient could bear it. So great a proof of the good effect of the application was daily evinced, that on the 1st of June it was omitted, the swelling having subsided, and the pain and fever having left him. He was discharged cured on the 8th.

Acids in Dysentery.—Dr. J. Young, of Chester, Delaware County, speaks in the highest terms of the use of *buttermilk*, and solution of cream of tartar, in the most violent attacks of this disease. He directs his patients to drink freely of these—"the more freely, the better"—and for more than a dozen years, in pursuing this treatment, it has been attended with uniform success. He says, "Sometimes, in addition to these means, I order calomel, ipecac., and opium, every two or three hours; sometimes an emetic, or a mercurial cathartic, or both are premised; and sometimes lemonade, or vinegar and water, or some milk, are ordered for drinks where they are preferred. But these constitute the whole of the articles I use in the treatment of this disease; and the facility with which it yields to such simple means, has often been a matter of surprise to myself. The objects kept constantly in view, are to remove constipation by the mildest possible means, to allay irritation and pains by morphine or opium (the former being always preferred, when at hand, because it is less constipating) and fomentations; and to remove the *alkaline* state of the contents of the bowels by acids in the form of drinks. Perhaps in some other localities, these means may not be attended with the same beneficial results that I have in every case found them produce; but such has been my success, practising on these views, and using these means, that I am emboldened to recommend them to others, believing that if acted upon in good faith, they will save him who tries them many anxious hours by enabling him to cure his patients before the disease progresses to inflammation and gangrenous erosions of the intestines; a state of things that will doubtless arrive in time, but which is believed to be mostly the result, not so much of the necessities of the case itself as of the erroneous pathology, and consequent treatment, generally taught and pursued in the management of its earlier stages."

Nitrate of Potass in Asthma.—A correspondent of the *New York Medical Gazette* says, that he had derived essential benefit from using the following remedy, in severe attacks of asthma, and has prescribed it for several patients with equal success. Immerse thick porous paper in a solution of nitrate of potass, and hang it up to dry. At the approach of a

paroxysm inhale the vapour by burning it in the room, or smoking it in a tobacco-pipe. The writer says he is acquainted with several asthmatics, who are unable to breathe in a recumbent position until their sleeping apartment had been filled with the above vapour. We can add our testimony to the utility, in some cases, of this remedy. We have several times prescribed it, and in some cases the relief it afforded seemed almost magical; in others, however, it entirely failed. The solution of nitrate of potass should be a saturated one; and after the paper has been immersed, and dried, it is best to immerse it a second time. A very good plan of filling the room with the vapour, is to roll a sheet up of the proper size, and place it in a candlestick. The end being then ignited, it gradually burns, and the vapour diffuses itself through the chamber.

Case of Paralysis of the Portio Dura, illustrative of a curious physiological fact. By J. B. Zabriskie, M.D., New York.—A case of paralysis of the portio dura lately occurred at the King's County Almshouse, which presented a curious physiological fact I have not seen in any other case which I have met with. J. Ward, a marine, aged 33, came to the poor-house with secondary syphilis, for which the ordinary treatment, consisting of an alterative course with sarsaparilla, was successfully used. But upon the subsidence of the syphilitic symptoms, he was suddenly seized with a paralysis of some of the muscles of the face. His mouth was drawn to the left side, the natural power of winking his right eye was lost, and he could not elevate the right angle of his mouth. As the senses of smelling, sight, hearing, the motions of the eyeball, the motions and taste of the tongue, and the motion of the lower-jaw, were perfect on both sides, the paralysis was evidently confined to the portio dura of the right side. But the most curious part of the case, and that for which I have been induced to relate it, is, that he could close the eyelids at will, while the involuntary winking was confined to the left eye, showing that the voluntary power of closing the eyelids is communicated by means of a different nerve from that which causes the natural winking—the latter depending upon the portio dura, while the former is probably derived from the ophthalmic nerve. This is confirmed by a case in the *Revue Médicale*, of April, 1829, in which both the trifacial nerve and the eighth pair of the right side were paralysed, and all power of closing the eyelids were lost. These two observations show that the voluntary motion of the eyelids is derived from the ophthalmic branch of the fifth pair, and the involuntary from the portio dura, and where both were paralysed both motions were lost.

Congestive apoplexy from drinking cold water.—Thomas Campbell, ætat. 40, an Irish labourer, was brought to the hospital about mid-day, July 1st, 1841, suffering from the effects of drinking cold water. All that could be ascertained about him was, that after taking a large draught of cold water, the day being extremely hot, and he at work on a building, he complained of feeling very sick, and soon fell into a state of insensibility. He had complained the night before of being somewhat unwell, but got up in the morning apparently well, and ate his usual breakfast. He was represented to be a man of temperate habits. In about two hours after he was taken, he was brought to the hospital. He was then in a state of complete insensibility, from which he could not be roused. The pupils were contracted to a mere pin hole, and perfectly insensible to light. His face was flushed and red hot. The skin of the body was of its natural temperature, but the extremities cold. Pulse almost imperceptible, and so quick as

scarcely to be counted. Every few minutes a sort of convulsion of the whole body took place, and in the interval all the muscles were in a state of rigidity; at times the spasms were very slow, resembling opisthotonos. Sinapisms were applied to the legs, thighs, and abdomen. A large enema, containing tinct. aloes 3j, was given. He was cupped freely from the temples, and the hair cut off and ice water constantly applied. At the same time, as the system was sinking under the shock of the disease, small quantities of warm brandy gruel were given him. These means, however, were followed by no perceptible effect. He sank gradually, and died at half-past 3 P.M.

Post-mortem examination eighteen hours after death.—The head, chest, and abdomen were thoroughly examined. The organs in the chest presented no marks of disease, except that the lungs were much congested with black blood. The stomach was reddened in irregular patches, the mucous membrane mamelonated and softer than natural. The other abdominal organs healthy. The brain showed marks of severe venous congestion in every part. The sinuses and large veins on the surface were swelled out with venous blood. The surface of the membranes presented a uniform darkened appearance, and the whole substance of the brain on being cut into was dotted with innumerable bloody points. Very large quantities of blood flowed from the divided veins at the base of the cranium, and from the foramen magnum; there was no extravasation of blood in any part; consistence of the brain natural.—*American Jour. of Med. Sciences.*

Midwifery Case.—Death after the head was expelled, and before the shoulders were delivered. Buffalo, July 6th, 1841, 18 a.m. I was called to attend Mrs. J. H., a large fleshy healthy Irishwoman, in labour for the fourth time. The waters had been escaping for five or six hours. Presentation natural, mouth of the uterus open to the extent of an inch and a half, pains sufficient, but slow. Two p.m. Mouth of the uterus dilated; pains rapid, head advancing. Three p.m. Head protruded through the vulva by the natural efforts. After the head was expelled the pains were rather suspended. In a few minutes the face turned to the left thigh of the mother. Felt the jaw move distinctly several times, but no crying. The pains became severe, but the shoulders did not advance. I hooked a finger into the right arm-pit, and attempted to draw down the fœtus, but without success.

After several attempts passed the corner of the handkerchief under the right shoulder (which was lying in the hollow of the sacrum), and by that means completed the delivery three-quarters of an hour after the head had been expelled.

Attempted to inflate the lungs with my breath after I had rinsed my mouth with brandy. I think I forced air into the lungs, for when I pressed on the abdomen froth escaped from the nostrils, but did not succeed. I could not persuade the parents (Catholics) to an examination. I think it weighed at least 12 pounds, but had not the means of weighing it. In considering this case the following questions present themselves.

1. Could this subject be said to be born alive?
2. Would the husband of this woman be entitled to the right of tenant by courtesy?
3. Would the fact of respiration having occurred, disclosed by dissection, be sufficient evidence to support the claim of the husband to the right of tenant by courtesy?—*Ibid.*

GERMAN.

Medical Statistics. By Dr. Cless.—From notes taken at St. Catherine's Hospital, at Stuttgard, during the course of eight years,

Dr. Cless has ascertained that the mean duration of disease is in general 20½ days.

	Days.	Patients.
From March to May it was	19,12	in 2925
From June to August	19,07	in 2927
From September to November	20,87	in 2504
From December to February	22,65	in 2761

The duration of diseases is then dependent on the seasons; it is shorter during the hot months; it becomes longer with the diminution of the temperature. It is evident that these data are not the effect of chance, but founded upon constant laws; for in examining the figures of each of the eight years we arrive at the same result. The work of Dr. Fenger, of Copenhagen, *Quid Faciant ætas Unnique Tempus ad Frequentiam et Diuturnitatem Morborum Hominis Adulti, Disquisitio Medico-Statistica* (Havniæ, 1840), also confirms these facts. The experience of Dr. Fenger extends over fifteen years, and upon 7608 patients.

The mean duration of diseases during	Days.
winter was	25,5
Do. do during spring	19,2
Do. do during summer	17,9
Do. do during autumn	19,8

Do. do throughout the year, 20,2

The mean duration of diseases is not the same for both sexes; it is about 19,38 for men, and 21,39 for women. Another question upon which Dr. Cless treats is that of the influence of epidemics over other diseases. During the last ten years, six epidemics have prevailed at Stuttgard; epidemic pulmonary catarrh three times; fever accompanied with some gastric affection twice; and dysenteric cholera once. During the prevalence of the epidemic pulmonary catarrh, the number of patients affected was as compared to those labouring under sporadic diseases, as 100 : 86; it was as—100 : 78 during the epidemic gastric fever; and—100 : 363 during the epidemic dysentery. Thus the proportion of epidemic diseases was to the sporadic as 100 : 107. The relative number of diseases during those months when no epidemic prevailed, compared with that of the months in which these affections were prevalent was—as 100 : 78 for epidemic catarrh; 100 : 64 for gastric fever; 100 : 105 for dysenteric cholera, giving a total mean of 100 : 78.

It results from these data that, conformably with the ancient opinion, the number of sporadic diseases lessens during the prevalence of epidemics.

On spasm of the fingers of the right-hand in writing. By Professor Langenbeck.—The disease here spoken of does not consist in that peculiar trembling of the fingers mentioned by Heyfelder, Albers, Caspar, &c., but of a contracted state of the *extensor* muscles of the index-finger, compelling the patient immediately to lay down his pen. In a case of this kind M. Stromeyer succeeded in remedying the involuntary extension of the finger by subcutaneous division of the tendons. M. Langenbeck was not so fortunate in a patient who came under his care, and in whom at two different times he divided the *extensor proprius* as well as the *extensor communis* of the index-finger. M. Dieffenbach has also, in two individuals, performed a similar operation, but in both cases a stiffness of the fingers was induced, which was productive of equally great inconvenience as the original affection. It is worthy of remark that the patient spoken of by M. Langenbeck was affected several years since with spasm of the larynx.

On the existence of vegetable parasites in aphthæ. By Dr. Vogel.—Schoenlein, Gruby, Gibert, and others have observed, in some diseases, the existence of vegetable parasites

upon the human body. Dr. Vogel also has remarked a similar production upon the *buccal* and *oesophageal* mucous membrane of an infant who died of *aphtha* fifteen days after its birth. The whole mouth and oesophagus as far as the cardiac orifice of the stomach was covered with an aphthous eruption. These aphthæ examined under a powerful microscope distinctly exhibited the form of the true *conferva*, similar to that found by Schoenlein in impetigo. In these vegetable parasites Dr. Vogel discovered two elements: 1st. Small round bodies, either with or without a central tubercle, sometimes isolated and sometimes grouped together; they were from 1-500th to 1-300th of a line in diameter, colourless, and remained unchanged in water, ammonia, and acetic acid. 2nd. Filaments variously disposed, of a slate colour, and dilated upon various points, either in the middle or at the extremities, and sometimes articulated together. Some of these filaments were distinctly traced from the round bodies above spoken of; some were a line or more in length; and their diameter was generally about 1-600th of a line; they were in like manner unchanged by water, ammonia, and acetic acid.

Dr. Stirling gives the following *resumé* of his work on the functions of the nervous system. 1st. The posterior columns are endowed with sensation, but simply from the posterior grey substance, and its union with the posterior fasciculi. 2nd. The posterior white medullary substance, or the posterior fasciculi, are only possessed of sensation from their union with the posterior grey substance. 3rd. The posterior grey substance is alone capable of transmitting sensations to the brain, and the common centre of perception. 4th. The posterior medullary substance alone is not capable of transmitting sensations to the brain. 5th. The anterior white medullary substance, or the anterior fasciculi, like the anterior roots of the nerves, are not possessed of sensation. 6th. The anterior fasciculi alone are not capable of transmitting volition to the motor columns. 7th. The anterior grey substance only is able to transmit volition from the brain to the motor roots, through the medium of the anterior fasciculi. 8th. The perfect integrity of continuity in the posterior fasciculi is not indispensable to enable sensation to be transmitted to the brain; neither is it absolutely necessary that the continuity of the anterior fasciculi be perfect for the influence of the will to be transmitted to all parts of the spinal marrow. 9th. The impressions given to the posterior grey substance are transmitted in all directions, according to the length and breadth of the spinal marrow, upwards, towards the brain, whence arises sensation; forwards, towards the anterior grey substance, thus causing the reflex movement; from one side to the other giving rise to sympathetic movements of greater intensity in the half of the body, which had not been originally stimulated. 10th. The impressions of the posterior fasciculi, like those of the anterior, are not transmitted proportionally to the length of the spinal marrow. The impressions of the posterior fasciculi pass from behind forwards, in a direction horizontal to the posterior grey substance; whilst the impressions on the anterior fasciculi proceed along the nearest motor roots. 11th. To produce sensation, it is necessary that there be between the irritated point and the brain, a perfect continuity of the posterior grey substance; for the exercise of the voluntary motions there must be a perfect continuity of the anterior grey substance between the brain and the root of the motor nerve before the function can result.

MEETING OF SOCIETIES.

PHRENOLOGICAL SOCIETY, EXETER HALL.—We purpose presenting our readers with an account of all the proceedings of the Phrenological Society during the present session.

Nov. 1st, 1841.—The President, John Elliotson, M.D., F.R.S., in the chair.

Dr. Elliotson exhibited a cast of the forehead of a Captain B., in which there was a remarkable depression in the situation of the organs of colour on each side. It appeared that there was corresponding deficiency in the faculty, for he could not distinguish between dark green and dark red; crimson velvet he called a sort of blue; and, upon being desired to look about and name some object of the same colour as a cake of yellow ochre, he named, after much deliberation, the grass outside the window. When signal officer on board he was sorely puzzled at first, and learned gradually to distinguish the flags by the relative positions of the light and dark parts. His brothers have the same deficiency in a less degree; his sisters not at all. The president remarked that the deficiency more frequently related to the red than either of the other primitive rays, occurred far more frequently in males, and was frequently hereditary.

He afterwards exhibited the cast of a boy, presented, like the last, by J. S. Prideaux, Esq., of Southampton, showing a head very high at the posterior superior part, with a very moderate development of the intellectual region, and a curious twist of the whole head. The only information was that the boy was very obstinate, and refused to be guided by any one but his mother—that he kicked all near him while the cast was being taken, and only sat still at last by a bribe of seven-and-sixpence.

Dr. Elliotson afterwards stated, that on a recent tour in the North of Italy he observed ample proofs of the spread of phrenology. Original Italian works on the subject were in all the booksellers' shops. Notices of phrenological lectures were affixed to the walls, marked busts were in the Museum of the great hospital, and of the Veterinary College at Milan, and no fewer than four marked busts were in the Museum of the University at Pavia. There were collections of skulls, over which was printed phrenological department.

Nov. 8.—Conversazione and lecture to Ladies and Gentlemen, and lecture by Dr. Elliotson, on the physiology of the brain and nervous system.

November 15th.—Mr. Swainson was elected an ordinary member.

A paper on Temperaments, by Mr. Prideaux, was read.

The author commenced by objecting to the designation of temperament applied by Dr. Thomas to relative development of the head, chest, and abdomen, and proposed to divide the temperaments into three, the sanguineous, lymphatic, and bilious. He opposed the establishment of a *nervous* temperament, this term being sometimes applied to a person with a fine texture, even though his head be small, and at others to a person of a coarse texture with a large head. He was of opinion that the quality termed nervous depends on the smallness of the diameter of the fibres of the primitive tissue, which smallness is not peculiar to any temperament, or relative development of parts, any more than coarseness of fibre. Capacity for rapid action he ascribed to fineness of texture; power to texture and absolute size; tendency to frequency of action, and relative energy, compared with other organs of the body, to relative size and texture conjoined.

FRENCH ACADEMY OF MEDICINE.—*Important Commission on Pulmonary Consumption*.—M. Louis stated, that a demand having been made to government for the foundation of an hospital at Algiers for the treatment of phthical patients, the Academy had requested communications from its correspondents upon various points connected with the history of this disease. The following details are from a work lately addressed to the Academy by Dr. Rufz, who is practising at Martinique:—

Of 1954 patients treated by him at *St. Pierre de Martinique*, 123 were phthical, 53 of whom died. In nine cases he was able to make a post-mortem examination. Phthisis is, according to him, the most frequent chronic disease in the colony. It is rare at the two extremes of life, for he has observed it but twice in children, and in those old people who have presented it, he considers that the disease had commenced at the adult age. According to M. Rufz, hemoptysis appears to be the cause of death more frequently at Martinique than in France. Having tried the effect of emetics, according to the practice of the charlatans of the country, he had derived the greatest benefit from them at all stages of the affection. In twenty patients subjected to this treatment, he was but three times obliged to suspend their employment. In two cases, the emetics checked the hemoptysis. M. Rufz also remarks, that the Europeans and Africans at Martinique appear less subject to phthisis than the Creoles. He is unable to give a decided answer to the question, whether Europeans arriving in the colony with symptoms of incipient phthisis, have, by the mere fact of the change of climate, experienced any favourable symptoms. But he is convinced that removal to an European climate is of no avail with the natives in checking the progress of this malady.

After a letter of thanks had been voted to M. Rufz, a discussion ensued upon a motion by M. Louis, that a certain number of travellers be appointed to collect facts in medicine, similar to what has long been done in the province of natural history; and that these researches, requiring great activity as well as information, would be better intrusted to young men than to corresponding members of the Academy, whose time must necessarily be so much taken up by their other avocations.

The proposition was eventually adopted for consideration.

FRENCH ACADEMY OF SCIENCES.—*Dissolution of urinary calculi*. The following letter was addressed to the Academy by M. Petit.—In one of the late sittings of the Academy, a report was read upon some communications by Dr. Leroy-d'Etiolles, on the above subject. Having employed the waters of Vichy as a means of dissolving urinary calculi, in a great number of subjects, I think it my duty to inform you of the result of my observations, with a view of directing the attention of the profession to the efficacy of alkaline drinks in these cases. I will, at the same time, answer an objection which has been again revived against the employment of these drinks, and which does not appear to me to have any foundation. The efficacy of the Vichy waters, and of alkaline drinks in general, in the treatment of gravel, is not contested; this efficacy is generally acknowledged. Nor is it completely denied that it may be possible to obtain the dissolution or decomposition of some urinary calculi by this means; only it is believed that this result is obtained in an exceedingly small number of cases. It would, in fact, be difficult now-a-days to deny altogether the possibility of such results; for if instances of this nature which have

HOSPITAL REPORTS.

KING'S COLLEGE HOSPITAL.

(Under Mr. PARTRIDGE.)

Geo. Alger, æt. 8, was admitted into King's College Hospital, on the 10th of Jan., 1842, with inflammation of the knee joint, the consequence of a blow which he received on the patella about six weeks previously. Immediately after the injury the child was conveyed to the Charing Cross Hospital, whence he was removed by the parents on January 10th, into King's College Hospital. The surface of the right knee joint was found to be much swollen, and at the upper part soft to the touch from deeply situated matter. There was an unhealthy looking ulcer of the size of half-a-crown over the patella, and the leg was bent to an acute angle on the thigh. All motion of the joint appeared to give great pain—the child was very thin and pale—the pulse quick, but the skin and tongue were moist. The boy was placed in bed on his right side, with the knee resting on a bran-pillow—the joint covered with folds of old linen wetted with Goulard lotion, and he was ordered saline mixture, &c. By these means, the heat of joint and pain subsided, so that slight movements of flexion and extension could be made without producing pain. A puncture, with a lancet, was made into the subside of the swelling above the joint, and a good deal of healthy pus evacuated. No fever followed this operation. In the course of a few days a second puncture was made on the inner side of the swelling, which was not completely emptied by the aperture on the outside, but a small artery in the wound bled so briskly that it became necessary to close it; however, the whole of the matter about the knee joint was freely evacuated in a few days by moderate pressure, and it was not again reproduced in any quantity; it could not be pressed downwards, and the knee could now be gently moved without pain, and the sore over the patella assumed a more healthy appearance; it became evident that no matter existed in the joint, but that, though deeply situated, it had formed above the cavity of the articulation. Under these circumstances, the boy's general health being improved, the appetite and rest at night good, and no visceral disease existing, Mr. P. began to entertain hopes of saving the limb, and for that purpose gradually extended the leg by interposing bran-pillows between the leg and thigh. On the 2nd of February, however, some fever appeared, and from that time, notwithstanding the apparent quiet state of the joint, and every precaution taken in the way of medicine and diet, the general health gave way—the pulse became accelerated—the tongue and skin rather dry—the appetite failed—there were occasional attacks of diarrhoea, and rapid emaciation. Under these circumstances Mr. Partridge determined to remove the limb, having previously ascertained by a careful examination, that there existed no visceral disease, either in the chest or abdomen.

OPERATION.—The femoral artery was compressed by an assistant, and the thigh removed about its middle by an anterior and posterior flap. The former was made first, and shorter than the posterior, on account of the retraction produced by the hamstring muscles. The femoral artery was in the posterior flap so close to its cut surface, that a small branch which arose from it, at its upper part, was cut so close to the femoral that it could not be taken up, and it became necessary to secure the femoral, above and below, by passing lightly underneath it, as in the case of a wound—no difficulty was experienced in doing this—the extremity of the femoral artery was secured by a third ligature, in all nine ligatures were necessary to stop the bleeding

vessels. Flaps united by stitches, and a few strips of plaster; water dressing; stump dressed fourth day.

LIGATURE ON FEMORAL ARTERY KNOTTED.

—Thinning of cartilage over right condyle of femur—no ulcerations—small pitting ulceration of cartilage on head of tibia—patella perforated by ulceration opposite the sore—pulpy state of the synovial membrane around this—it was otherwise healthy, and except in the particular membrane the cartilage was healthy; there was no pus in the joint.

The stump has been dressed with a plaster devised by Mr. Moore, having resin in it, but spread in the usual way on calico, and quite adhesive. The general health and appetite have improved; boy sleeps well—the pulse is quiet—there is no fever. Discharged.

ST. GEORGE'S HOSPITAL.

Scrofulous disease of the testicle.—Wm. Heffernan, aged three years, admitted April 28th, 1841, under Mr. Babington. The right testicle has been swollen for some time, and modulated tumours are distinctly apparent. The left presents also this lobulate appearance. No pain experienced on pressure. The cord is thickened, scrofulous appearance; general health bad.

A hernia has also existed on the right side for some time, and for which he has been attended by the family surgeon, but the testicle was not observed in a diseased state until he appeared at the hospital.

Cerat saporis—ext. conii, aa. ʒj; ft. unguent.

R. inf. sarzæ, alk. ʒiss, ter in die sumendus; ordinary diet.

30th. To have a suspensory bandage for the testicle; pulse medicina.

May 3rd. General health better since admission, and less hardening of cord.

9th. Feels no pain in testicle, which has become softer and diminished in size. The modulated surface mentioned on admission has entirely disappeared; bowels open, tongue clean.

16th. Going on improving in every respect.

22nd. The right testicle still appears harder and larger than the left.

29th. Continues much in the same state of health; appetite good.

June 5th. There has been developing itself for some time a slight tumour over the body of the testicle, and under the vessels of the cord. In other respects the testicle has become of the same size as the less.

11th. Tumour mentioned in last report rather increased in size.

19th. To-day the ungt. hydrargyri was ordered to be applied instead of the soap and conium; pulse medicina.

July 1st. Tumour much lessened in size.

11th. Nearly gone.

20th. Made out-patient.

REMARKS.—The absence of pain, coupled with the soft and lobulated feel of the testicle, indicated scrofulous disease, especially in a habit purely scrofulous. The good effect of the alkali combined with the sarzæ was well observed in this case. The unguent. was attended with beneficial results.

At the time the child was placed on the out-patients list, both testicles had become more natural, which combined with the restoration of the child's health, leaves a reasonable anticipation that the patient may eventually recover, the great point being kept in view, viz., a sharp and unceasing eye upon the constitution, keeping it if possible generally good.

been observed both by myself and by others, have not been always stated with sufficient minuteness, because the patients, once cured, or at least experiencing no further symptom of stone, have been unwilling to be again sounded, still there are cases in which this examination has been made, both before and after the treatment, and which consequently show in the clearest manner the possibility of succeeding in some cases at least. I have never, however, pretended that this treatment must always be perfectly successful; I agree with M. Leroy-d'Etiolles, and have previously expressed the same opinion, that when the calculi are very large, and especially when they are possessed of such hardness or cohesion as to offer great resistance to the action of the alkali, and that, consequently, the mucus, which serves as a kind of cement to bind the particles of the stone together, can be but feebly acted upon; I know, I say, that then their decomposition is necessarily very slow, and perhaps even in some cases altogether impossible; and hence, although we may almost always afford relief in such cases, we find but few who have sufficient perseverance to wait for a perfect cure from the action of alkaline drinks alone. For my own part, I feel perfectly convinced that, where the calculi are not very large, nor possessed of great hardness, the probabilities are very great of our being able to destroy them completely by means of alkaline drinks. At the same time I wish it to be understood that I do not here speak of calculi of oxalate of lime which, when pure, would probably be proof against this treatment. I now wish to address myself to an objection made to the employment of alkaline drinks, an objection previously raised by Prout and Mareet, and renewed by M. Leroy-d'Etiolles, viz., that the long-continued use of these drinks may, by neutralizing the free acids of the urine, favour the formation of calculi of the phosphates of lime and magnesia. Theory may perhaps give rise to such an apprehension, which, however, is not justified by practice. Thus, Dr. Lucas, who, during thirty-two years, has administered the Vichy waters to a very large number of patients, has never observed calculi of any kind in persons habitually employing them. Again, do we not know that the workmen who pass a part of their life in the alkali works, and in whom the urine is almost always alkaline, have perfectly good health, and are never subject to stone? On referring to past experience, I can assert that I know a very great number of patients who have for years constantly used either the natural Vichy water, or the bi-carbonate of soda, and that although some of them laboured either under gravel or stone before their employment, they have not only been perfectly free from these diseases since, but their urine is always in the most satisfactory condition, and their general health appears to be sensibly improved under the influence of this treatment. If phosphatic calculi are occasionally met with in some patients who have used alkaline drinks, it is more than probable that these calculi existed before the employment of this treatment, or that these subjects have, in addition to the calculeous affection, been labouring under some previous disease of the urinary passages, or some obstacle to the free excretion of the urine, which almost necessarily leads from the prolonged retention of this fluid within the bladder, to purulent catarrh, as well as an ammoniacal state of the urine. In support of this opinion, I may cite the assertion of M. Leroy-d'Etiolles himself, who acknowledges that it is under such circumstances only that he has met with the formation of phosphatic calculi.

DISEASES OF MENSTRUATION.

By T. W. B. KIRKBY, M.R.C.S.L.

AMENORRHŒA.

Amenorrhœa may be divided into *emansio mensium*, or the non-appearance of the menstrual secretion at the age of puberty, and *suppressio mensium* or suppression of the menses.

Emansio mensium or retention of the menses, As already observed in the essay on menstruation, the age at which the menstrual function is first established, varies in different females, being delayed to even the twentieth year in some cases.

When the health of the female does not suffer, and the usual signs of puberty are also absent, the person remaining girlish and undeveloped, no apprehension need be caused by the absence of the discharge, and medical treatment is uncalled for. But, on the other hand, should the signs of puberty be present, and the health of the patient suffer, the menstrual discharge being retained, medical treatment must be enforced in order to promote its appearance.

Causes.—Retention of the menses may take place from congenital malformation. There may be deficiency of the ovaria, imperfect formation of the uterus or Fallopian tubes, absence of the uterus or vagina, cohesion of the vagina and labia, or an imperforate state of the os uteri or hymen. If malformation does not exist, there may be a want of power and vigour in the system. Debility may be caused by luxurious and indolent habits, gross diet, heated apartments, &c.

Symptoms of simple amenorrhœa.—In full plethoric, red-faced individuals, there are pain and heaviness of the head, giddiness, palpitation, full quick pulse, flushed countenance, hot skin, and febrile action. In the weak and debilitated, there may be headache, attended with intolerance of light and sound, violent throbbing, small weak pulse, absence of fever, pallid and chlorotic cast of countenance, languor and general debility, and the symptoms may ultimately become those of chlorosis.

Treatment.—In all cases our object should be to endeavour to ascertain if malformation is present; this cannot be done at first, but if the usual remedies have produced no effect, and the disease continues obstinate, an examination must be insisted on.

In full plethoric females moderate blood-letting, or the application of cupping-glasses to the neck, and active purgatives, may be prescribed, followed by more gentle laxatives, as the pil. aloes. comp., or aloes and colocynth at bed-time, and a senna draught with magnes. sulph. in the morning; light diet and exercise. Sometimes cupping the loins, or applying leeches, and the use of the hip-bath, are the means most likely to prove successful.

Maekintosh recommends six or eight leeches to the vulva or groin about the occurrence of the monthly periods, as indicated by the aggravation of symptoms and increased suffering of the patient. He also speaks highly of the saturated tinctura cantharides, commencing with ten drops three times a day, and gradually increasing the quantity to thirty, forty, or even sixty drops. Should stranguary or irritation of the bladder or urethra ensue, the remedy must be suspended, and camphor and hyoscyamus be exhibited together with diluents, particularly linseed tea.

In weak and debilitated females our great object is to promote the general health, and strengthen the system. This will be best done by a light nutritious diet, moderate use of wine, gentle exercise, the use of the warm hip-bath, warm clothing, and the avoidance of cold. A brisk purgative may be given at first, and the

bowels must be afterwards gently acted upon by the aloetic pill, combined with assafoetida where flatulence is present. The *mistura ferri compisitor*, or the sulphate of iron and quinine, will also assist to improve the general health. Stimulating injections are sometimes employed, as—

R. Liqueoris. Ammon. Fort. 3j.

Aquæ, ʒxvj.

M. Ft. injectio. To be injected per vaginam two or three times a day.

SUPPRESSIO MENSIIUM.

Suppression of the menses may take place either suddenly during the catamenial period, or from causes acting so as to prevent their expected return.

The former is most commonly caused by violent emotions of the mind, as grief or excessive joy, the sudden application of cold, fright, and all causes that have a most direct and powerful effect on the system.

During the time the allied armies entered Paris, a great number of the French women were thus affected. Dr. Burrows has also witnessed a case of acute suppression ending in mania and catalepsy, which was occasioned by sexual intercourse under very exciting circumstances during menstruation.

Symptoms.—Sometimes no immediate ill-effects display themselves when the menses are suddenly suppressed; in others, determinations of blood to various organs—as the brain, lungs, and intestines, follow. The general health may become impaired; sallowness of the complexion, emaciation, derangement of the stomach and bowels, or even fever, with hot skin, thirst, nausea, headache, pain of the back and limbs, &c., or even inflammation of the uterine, lungs, brain, or intestines, may set up. Hæmorrhage from the nose, lungs, or bowels, is not uncommon. Hysterical affections of different organs, stimulating inflammation may result; the abdomen may be tumefied and painful, and the mammae tense and swollen.

Vicarious discharges may recur at the time of each menstrual period, and continue with regularity, thus relieving plethora. Sudden suppression of the menses may even cause fatal consequences.

Treatment.—In this form of the disease our first indication is to endeavour to procure a return of the menstrual secretion. For this purpose, immersion of the feet in hot water, the hip-bath impregnated with mustard (one ounce may be added); a clyster may be employed to open the bowels, and assisted by a gentle purgative, or an emetic may be given, followed by an active saline purgative. If the patient be plethoric, a moderate venesection, or leeches applied to the groin or os uteri, will be beneficial. If spasm of the stomach and intestines, or great pain in the uterus be produced, Burns recommends full doses of laudanum, combined with ipecacuanha, or with saline, jalap, and warm diluents. Should fever, with local symptoms indicative of inflammation of the uterus or other organs, be present, venesection, leeches, and other antiphlogistic remedies must be used.

CHRONIC SUPPRESSION.

The menses may be prevented from returning at the regular time, by causes acting during the interval. This variety has been termed *chronic* suppression, in distinction to the *acute* form, as it frequently supervenes on the latter; it is also called "obstruction."

Causes.—Are bad state of health, habitual constipation, exposure to cold, unwholesome diet, great fatigue, loss of blood, profuse mucous discharges, excessive venery, and frequent abortions.

Symptoms.—Are such as denote general derangement of the health; organs prone to

disease are more likely at this time to assume morbid action.

Diagnosis.—Should the suppression of the menses depend on pregnancy, this will be learned by the effects—as morning sickness, &c.

Treatment.—We must remember that suppression of the menses is most frequently merely a *symptom* of ill-health, and not the *cause*, as is too commonly supposed. Our treatment must therefore be directed to restore the healthy functions of the body by the means already laid down.

Emmenagogue remedies, or those medicines that are supposed to possess a specific power over the womb, and which have been resorted to by medical men in cases of amenorrhœa for reproducing the menstrual secretion in conjunction with the general treatment, the following appear to have proved most successful.

Savine—from five to ten grains of the powdered leaves three times a-day, or a drachm of the compound tincture twice a-day.

Dr. Locock recommends a combination of myrrh, aloes, sulphate of iron, and the essential oil of savine.

Ergot of rye—five to ten grains of the powder two or three times a-day, boiled in a little milk. In very irritable habits the ergot must be cautiously administered, as it has been found, after a few days, to produce sometimes violent and even highly dangerous spasmodic attacks.

Iodine in form of tincture, with hydriodate of potash, ten to twenty or thirty drops, two or three times a-day.

Strychnine—one-tenth to one-fourth of a grain, two or three times a-day. This medicine must be suspended for a few days, should headache or twitching of the muscles follow its exhibition.

Madder, myrrh, guaiacum, mustard-seed, valerian, electricity, aloes, have all had their advocates.

In Dr. Ashwell's report of obstetric cases, vol. 3, Guy's Hospital Reports, out of nine cases of amenorrhœa admitted into the hospital, seven simple and two complicated, "six of the simple cases occurred in the persons of delicate females, and the remaining patient was a strong active plethoric girl, of 19. The former was treated by aperients and metallic tonics; four employed the ammoniacal injection with benefit; while electricity in some cases seemed to be of great service in exciting menstruation."

In cases of *amenorrhœa combined with epilepsy*, Dr. A. employed the following formulæ, recommended by Dr. Bright:—

R. Pulv. digitalis, gr. j.

Pulv. Myrrhæ, gr. ij.

Ferri sulphatis, gr. j.

Syr. q.s. ft. pil. ter die cass.

"Under this treatment the fits became diminished in number, and the menstrual function normally established."

MEDICAL MEMS. OF THE WEEK.

BY PERISCOPICUS.

TINEA.—Formulæ used in the treatment of tinea capitis.—The following are the formulæ commonly employed by M. Casenave in the treatment of this disease, at the Hospital of St. Louis:—*Ioduret of sulphur ointment.* Ioduret of sulphur, 1 scruple; lard, 30 scruples. *Depilatory ointment*—Subcarbonate of soda, 8 scruples; lime, 4 scruples; lard, 30 scruples. *Pitch ointment*—Citrine ointment, 15 scruples; pitch ointment, 30 scruples; or, powdered pepper, 2 to 4 scruples; lard, 30 scruples. The ointment is applied every evening; in the morning the head is washed with the following lotion:—Subcarbonate of potash, 8 scruples; distilled water, 500 scruples.

VACCINATION.—The operation of vaccination is often impeded by the dry and flaccid condition of the skin to which the matter is applied. To remedy this, M. Hulard, of Rouen, proposes the preliminary application of one or two small cupping-glasses over the part, for the purpose of stimulating its vitality, and affirms that he has had recourse to this method with the best results.

HUMAN GLANDERS.—This frightful disease has been making great way recently in Ireland. Near Armagh, according to the editor of the Dublin Press, cases are of very ordinary occurrence, and we think that the subject should be inquired into by some medical commission, as a preliminary to legislative interference if that should appear advisable.

ELECTRO-PUNCTURE.—Before performing the section of the muscles of the eye, Dr. Eisenmann proposes the employment of electricity, especially when the strabismus depends on a relaxed state of the muscles; this agent, of course, must be employed with very great care.

OPIUM.—A great number of medicines are usually given in combination with opium; in these cases, says Dr. Eisenmann, the narcotic does not act simply as a corrective, but almost always has some additional virtue of its own; he especially recommends it in combination with sulphate of copper in cholera, dysentery, and the diarrhoea of children. In rheumatism, he has found very efficacious a mixture of six parts of *vin. sem. colchici*, and one part of laudanum, of which 20 or 25 drops are to be taken every three or four hours.

A NEW INSTRUMENT.—In a case of double cataract, Professor Stromeyer having performed the operation for extraction in the ordinary manner, had great difficulty in detaching the crystalline lens from the iris, and from the pressure which he was obliged to use upon the globe of the eye, a great quantity of the vitreous humour was lost; the crystalline lens was however extracted, but the patient did not recover his sight from the subsequent occlusion of the pupil. To prevent a similar accident in the other eye, in which the adhesions between the crystalline lens and the iris seemed much firmer, M. Stromeyer performed excision of a portion of the pupil at the same time that he made a free passage for the lens; for this purpose he employed an instrument very similar to the cataract knife of ageger; it consists of a spear-shaped steel blade, grooved upon one of its surfaces, and which receives a second cutting blade made to glide along the first, also by means of a groove fixed in the handle. With the spear-shaped blade he makes a puncture in the cornea near its outer edge, advances into the anterior chamber, and allows the aqueous humour to escape along the groove of the instrument. The iris then projects behind the cornea, and the operator removes a portion by means of the second or cutting blade, which he introduces behind the first.

FISTULA.—According to M. Roser, the *fistulae* which are best treated by cauterization, are those with very short passages, as the vesico-vaginal, in which the mucous membranes of the bladder and the vagina have a tendency to unite by lining the edges of the opening, in a similar manner to the integuments of the lips. The important point is to prevent this union taking place, and this is best effected by the action of cauterization, which causes a puckered state of the vaginal mucous membrane. A similar practice has been already recommended by Sir A. Cooper and Delpech.

PERFORATION OF THE STERNUM AND OF THE AORTA BY THE BLOW OF A KNIFE.—Dr. Caspar states that he has been unable to discover any previous instance of perforation of the sternum by a cutting instrument. The

subject in this case was a woman who was stabbed in the chest by her husband in a fit of anger, with a common table-knife. Death was instantaneous. On the autopsy no blood was found to have escaped externally, nor was any ecchymosis discovered beneath the skin, the wound appearing as if made upon the dead body; on opening the chest a large quantity of blood was found effused in the *mediastinum*. The sternum was perforated as well as the trunk of the aorta. As a medico-legal question this presents great interest, as showing the difficulty of distinguishing wounds made before from those made after death.—*Wochenschrift Fur Die Gesamte Heilkunde*.

CALCULUS IN A CHILD.—M. Guersant relates the case of a child, 10 years and a half old, on whom he operated successfully for the above disease. The child had already been twice subjected to the operation of lithotomy at the respective ages of 4 and 8; but the cure had on each occasion been of very short duration, the symptoms of the calculous affection returning with equal intensity. M. Guersant then performed the operation of lithotomy by the *bilateral* method, and extracted upwards of three ounces of fragments of stone. It was necessary to introduce the forceps 32 times, and the scoop 5 times. In spite of the tediousness of the operation, the little patient got well without any drawback.

CHOLERA.—Dr. Watson has seen good effects follow the injection of warm water into the veins. There are many successful cases recorded. One was a woman in the Middlesex Hospital, rescued when at the verge of death by the injection into her veins. (An instance has been recently mentioned of a successful case of *transfusion of blood* into the veins of a patient in the Westminster Hospital, under the care of Dr. Roe.) It is remarkable that some of those patients thus operated upon recover rapidly, and at once; while others fall into a state of continued fever, which frequently proved fatal some time after the violent and peculiar symptoms have ceased. Some, after the vomiting and purging, and cramps have departed, die comatose (*over-drugged*, sometimes, it is to be feared, by opium). The rude discipline to which they are subjected may account for some of the cases of fever; and the system of injecting the veins is certainly attended with much danger. The injection of *air* with the water—inflammation of the vein from violence done to it—an over-repletion and distension of the vessels by the liquid, *might*, and sometimes, he supposes, *does*, occasion the death of the patient. It would then appear, from all the statements on this subject, that if a balance were fairly struck, and the exact truth ascertained, it would be very questionable, according to the doctor, whether the aggregate mortality from cholera, in these countries, was in any respect disturbed by our *craft* or remedial agents. Excepting always the cases of preliminary diarrhoea, just as many, though not, perhaps, the very same individuals, would probably have survived had no medication whatever been practised.

ABSORPTION OF DEAD BONE.—Sir B. Brodie believes that Mr. Stanley has answered the question relative to absorption of bone correctly, when he said that dead bone may be absorbed if not separated from the surrounding parts; but if separated no absorption can take place. If a node ulcerates on the forehead, or you open it and expose dead bone which is not separated, this bone in some cases exfoliates; in others, if you watch it, you will observe a red spot appear after a short time; others, and ultimately the whole surface, will be covered with granulations, which have gradually eaten away the dead bone. Sir W. Blizzard put some pieces of dead bone into the granulations of an

ulcer, and thought their weight was diminished; but his experiments are not to be trusted, more especially as others have not borne him out.

DELIRIUM TREMENS.—Dr. Burne recommends that we should endeavour to procure sleep in this disease, but does not advise us to employ opium until we have thoroughly purged the patients, as he is inclined to think that opium only maddens the patients. In a case which recently came under his care in the Westminster Hospital, the following prescription was administered by the apothecary:—*R. Liq. opii. sed., m. xl; mist. camphoræ, ʒj. Ft. haust.* The patient became worse and worse until hydrarg. chlorid., gr. x., was administered, in conjunction with the decoct. avenæ, which soon had the desired effect of tranquillizing the patients. He has observed that the *fæces* are generally dark coloured, and very offensive. If a patient be in the meridian of life and plethoric bleed, if he be shattered and past the prime, do not bleed.

DISEASED JOINTS.—In some cases of diseased joints, Sir B. Brodie has found the following very beneficial:—*R. Sarza jamaci incis et cont, ʒij.; liquoris potassæ, ʒij; aquæ. destill. bull, ʒxviij. Mache in vaso clauss per horas, xx. et cola.* Dose, ʒiv. to ʒxvj. quotidie.

HYSTERIA.—Dr. C. J. B. Williams asserts, that phthisis affects hysterical subjects as well as others, and in them the symptoms of phthisis are conjoined at first, at least, with those of hysteria. He believes that the irregularity of functions, and the state of general ill-health met with in nervous females, constitute aggravated forms of hysteria, and that this is a condition peculiarly predisposing to phthisis. The truth seems to be, that in hysterical and nervous subjects, effects and symptoms are produced by a smaller amount of *tubercle*, or any organic disease, than in one that is not nervous, yet the effects and symptoms that are so induced, are less in those commonly resulting from the organic disease than those of hysteria; or, at least, some combination of the two, in which the nervous phenomena eclipse the rest. Hence the more serious disease, although advancing, *is marked*, whilst the acknowledged nervous disorder gains *full attention*.

EPILEPSY.—Dr. Jansion recommends the internal use of the hydrocyanate of iron in epilepsy, which he regards almost as a specific in that disease, when not dependant on organic changes.

DIABETES.—M. Bravais has detailed a case of diabetes mellitus occurring in an aged man, which was cured by strict attention to diet. He was restricted to animal food, beef, mutton, poultry, milk, eggs, cheese, &c. The treatment was continued for four months and a half; the patient had an apoplectic attack eight years before. This would prove to the medical profession the absolute necessity there is for attending to a dietetic plan of treatment in this as well as in all other obstinate diseases.

STATISTICS OF OPERATIONS FOR HERNIA.—From the 1st of January, 1836, to the 1st of January, 1842, 220 operations for strangulated hernia have been performed in the hospitals in Paris, of which 133 proved fatal. In 1836, of 37 operations, 24 were attended with fatal consequences. In 1837, of 36, 24 died; in 1838, 33 operated on, 20 died; in 1839, 36 operations, 20 deaths; in 1840, 37 operations, 21 deaths; in 1841, 41 operations, 24 deaths:—of the 220, 100 were men, 120 women. This would give a decided amount of favourable cases to British practitioners over our neighbours in France.

CANCER OF OMENTUM.—A woman labouring under dropsy of both ovaries, was also affected with scirrhus engorgement of the neck of the uterus; besides which, a tumour could be

felt at the back of the vagina, which appeared to be seated in the posterior paries of the canal for it was found on examination that it was not connected with the rectum. The autopsy showed, besides the ovarian dropsy, cancerous degeneration of the omentum, of the kind called gelatini form, a portion of which, two inches broad and one thick, had separated and fallen down into the vagino-rectal cul de sac of the peritoneum, where it had formed the hard tumour which had been discovered during life. This is not an unusual form of cancer, met with in such cases as the foregoing. *It is more frequent than is supposed.*

DYSMENORRHOEA.—As a general rule, in women of a plethoric habit of body, repeated venesections will occasionally bring on the menstrual secretion; nervous women require sedatives and antispasmodics; the weak and chlorotic stimulants and tonics, especially chalybeates. When dysmenorrhœa is caused by any disease, that disease must be removed before the menstrual secretion can be reproduced. There are exceptions to this general rule, where caution is requisite.

THE HYMEN.—M. Valpeau states in his lectures on diseases of the uterus, that the tubercles which result from the rupture of the hymen, instead of becoming atrophied, as is generally the case, occasionally enlarge and are the seat of much irritation, so as to be mistaken for polypi, or the effect of venereal disease. Astringent lotions, or excision, will effect a speedy and perfect cure.

MEDICAL FEES.—The practitioners in Texas only charge for *one* visit when several members of a family are ill, and *one* dollar extra to be allowed for each prescription.

MEDICO-POLITICAL MEMS. OF THE WEEK.

LONDON UNIVERSITY.—There has been a great and very unequal reduction in the salaries of the examiners of this corporation. The salaries of the examiners in classics and mathematics have been reduced from £200 to £175; in those of the examiners in anatomy, in surgery, and in medicine, from £250 to £175, and that of the examiner in physiology and comparative anatomy, from £250 to £100. The character of the medical degrees will not improve in consequence of this arrangement. Dr. Roger's retirement is one symptom of this. The reduction is thus accounted for. Mr. Goulbourn communicated, about November last, a wish for an economical revision of salaries. The senate demurred to its propriety, but a further announcement that the chancellor would of his own authority reduce the parliamentary grant £800, produced a rather tame submission, which if right proves their past practices wrong.

MEDICAL REFORM.—It appears that Sir James is not pledged to defer his bill to next session, and if there be opportunity, which is not a very likely thing, he may bring it in before the present session closes. Sir James' secretary in his note confesses what we before intimated, that the measure was not thought in its state of completion.

ETIQUETTE.—Carlisle is the seat of another professional battle. Dr. Barnes is the sole physician extraordinary of the Carlisle Dispensary. Mr. Reeves is the former apothecary, and at present an honorary medical officer of the institution. Mr. Dacre is professional gentleman not yet in the possession of a diploma, who superintended during the illness of Mr. Reeves as apothecary; and Mr. Boyd is the new apothecary and successor of Mr. Reeves. A case was under the joint care of Mr. Boyd and Mr. Dacre, and in the midst of their treatment Mr. Reeves interposed, countermanded

their prescription, stating at the time to the patient's mother that it was wrong. The matter was at once submitted to Dr. Barnes, and his answer was, "Pooh! pooh! it's all professional etiquette, and that's all humbug." It was submitted to him a second time, and the answer was still more unsatisfactory. Dr. Barnes told Mr. Boyd that it was his duty to act only as he was ordered; that Mr. Reeves and Dr. Barnes were his superiors; that he was their servant, and that his business in the Dispensary was that of a mere menial! Mr. Boyd immediately resigned. Dr. Barnes denied to the committee using the word menial. Mr. Boyd and Mr. Dacre asseverate that he did. The infirmity committee take no step pro or con, and thus the matter rests. Our statement is taken from that of Mr. Boyd, but if true, as it appears to be, we cannot avoid expressing an opinion that Mr. Reeves and Dr. Barnes have acted most unprofessionally and most ungentlemanly, and that till reparation or a satisfactory explanation be given, they are entitled to an undisturbed residence in Coventry.

MEDICAL NEWS.

COLLEGE OF PHYSICIANS.—The Gazette insinuates that we were wrong in a statement of ours regarding the probable changes in this body, and announces that the licentiates will be called members, not licentiates. We were not ignorant of this *important* change. But we cannot make nice distinctions between the same things because differently appellated. Tweedledum and tweedle-dee are much alike to us. We should be sorry to conform with these contemptible differences. Some of the other *real* clauses recommended by the present fellows, though we fear that all their enemies will fall far short of what the licentiates or the public justly demand.

IRISH CORONERS.—Mr. White of Dundrum relates a case where after giving attendance for several hours at an important inquest, performing a post-mortem examination, giving evidence at two sittings, &c., he was told by the coroner on applying for an order for remuneration, "that he would think of it." The coroner having brought a private surgeon of his own to the inquest (from a distance too) he allowed however months to pass without yet thinking of Mr. White.

IRISH MEDICAL CHARITIES.—The Irish Medical Association have by their council passed resolutions strongly condemnatory of the supposed project to place the dispensaries and fever hospitals of Ireland under the management of the Poor Law Commissioners. They admit the necessity of medical and general superintendence, but properly demur to the Commissioners being the superintendents.

ROYAL INSTITUTION.—Mr. Faraday delivered a lecture "on the conduction of electricity by lightning rods," on Friday evening last, in the course of which he took occasion to demonstrate the worse than inutility of the lightning conductors, as at present conducted, as, instead of conveying the electric fluid directly to the ground, they are liable to give forth a lateral spark from any part of the rod, on application of the requisite stimulant, and which spark, he shewed by experiment, was fully capable of firing gun-powder, gases, &c.; in fact possessed distinctive power equal to the most intense flash of lightning, to which it is of course analogous. In illustration of this part of the lecture, Mr. Faraday mentioned a case that had occurred in Paris, where the lightning had struck a leaden gutter, a lateral spark from which struck a man who was standing near, and killed him on the spot. The

sole remedy to prevent the emission of the lateral spark, is to connect all bodies which might attract it with the rod; for instance, gutters, leads, roofs, bolts, &c.

PROFESSIONAL INCREDULITY.—The late Sir Astley Cooper, probably the ablest surgeon, take him all in all, the world has bred, but not less able as a shrewd judge of the world, was told by Dr. —, a living London physician, eminent for his general talent and scientific character, as well as for his professional knowledge and judgment, that having been sent for into Kent, to see a patient, the apothecary begged the doctor would look at another, the subject of some nervous disorder, who, among various odd symptoms, could only discern things properly when held to her upside down; and the doctor accordingly saw her read inverted books: "My dear sir," said Sir Astley, "that is very curious, but you know you must not tell it." Here are useful lessons! We know cautious people say, "How is knowledge to be improved, if we are to suppress every thing new?" To this we might reply boldly, What occasion, pray, is there for the improvement of knowledge? would you excel all that has been?—would you be felicitous Augusto, melior Trajano? a more prosperous surgeon than Cooper, a better physician than Baillie? And pray what did Harvey get by discovering the circulation of the blood? why, he lost his practice: or what did Galileo do, when he found that proving the Copernican theory true, threatened to bring him to the stake? Most properly, he gave up the discovery, and allowed the earth to remain theoretically stationary. And pray did this prevent the truth, which he abandoned, becoming established? Quite the reverse: it is for the interest of truth itself to suppress it: like the chamomile, the more it is trodden on, the faster it grows, or

"Daris ut illex tonsa bipennibus,
Per damona, per cœdes, ab ipso
Ducit opes animumque ferro."

WORKS OF LAPLACE.—M. Villemain, the Minister of Public Instruction, has applied to the French Chamber of Deputies for a grant of money to be applied to the reprinting of the three great works of Laplace, copies of which have become very rare, while the works themselves belong to the high class of science, which makes purchasers of them too limited to induce private speculators to adventure on their republication. The widow of Laplace surrenders her copyright to the state; and the minister requires 40,000 francs for 1,000 copies of seven quarto volumes, a portion of which he proposes to give to the public libraries, and libraries of scientific institutions throughout the kingdom, a few to be placed at the disposal of the Institute, one to be given to Madame Laplace, and the remainder to be sold.

ROYAL COLLEGE OF SURGEONS, LONDON.

List of Gentlemen admitted members, on Friday, April 15th, 1842:—

John Deakin, William James Hill, William Carter, Otho Edward Henry Huchcrer, Henry Freeland Carter, Maurice Thomas West, Sylvan Michell.

Admitted Monday, April 18th, 1842:—

David Morgan, John Serjeant, William R. Boyce, Edward Gaskell, William R. Clarkson, William Grey, William Player, Thomas B. Gilderleaves, Benjamin Barkus, John Nicholson, Duncan R. McNab, Thomas E. Lander, Samuel Mason.

MEETINGS FOR THE ENSUING WEEK.

- MON. Medical Society of London, 8 p.m.
 — Statistical Society, 8 p.m.
 TUES. Royal College of Surgeons, lecture, 4 p.m.
 — Horticultural Society, 3 p.m.
 — Linnean Society, 8 p.m.
 — Electrical Society, 8 p.m.
 — Chemical Society, 8 p.m.
 WED. Geological Society, half-past 8 p.m.
 THU. Royal College of Surgeons, lecture, 4 p.m.
 — Royal Society, 8 p.m.
 FRID. Apothecaries' Hall, lecture, 3 p.m.
 — Royal Institution, half-past 8 p.m.
 — University College Medical Society, 8 p.m.
 SAT. Royal College of Surgeons, lectures, 4 p.m.
 — Westminster Medical Society, 8 p.m.

ERRATA.—In consequence of the illness of a Co-laborer, whose province it is to attend to such matters—several errors crept into our last number, which we deem it necessary to notice. In the editorial observations, Dr. Hall should be read instead of Dr. Hall—instead of "Pall Mall, exclusives, &c.," read "the Pall-Mall exclusives, &c."—instead of "Dr. Arnott, &c.," read Dr. Arnott, Dr. Elliotson, Dr. Hastings, and contemptible reformers like them will allow Dr. Hall to enjoy all his worthiness and distinction as unenvied as it is unthought about.—At the conclusion of leader, instead of "Hilary" read "Litay"—at the conclusion of Dr. Williams's Lecture, for "pus is not all viscid," read "pus is not at all viscid,"—for "alternatives" read "alteratives"—for "torbefacients" read "sorbefacients." The same cause explains the re-insertion of a paragraph which appeared in our Journal some months before, on the college appointments.

ADVERTISEMENTS.

IMPORTANT TO MEDICAL STUDENTS AND DISPENSING CHEMISTS.

Just Published, price 5s., Third Edition,

A GRAMMATICAL INTRODUCTION to the LONDON PHARMACOPOEIA, and a KEY to LATIN PRESCRIPTIONS. By S. F. LEACH.

The former Editions of this Book were adapted principally to the wants of the Medical Student:—the present is considerably extended, so as to meet the requirements of all those who are concerned in making up and dispensing Latin Prescriptions.

This little Work contains a compendious outline of the Grammar and Syntax of the Latin Language; an Analysis of the London Pharmacopoeia; a Key to Latin Prescriptions; and a Vocabulary of all the words used in the Pharmacopoeia and Prescriptions; with Rules for the Gender of Nouns and Conjugations of Verbs, &c.

It also includes a List of the Former and New Names of Medicinal Preparations; the Tables of Chemical Elements and Symbols; a Description of English Measures; the Abbreviations and Contractions used in Prescriptions; and a very copious Explanation of many of the Formulæ commonly employed.

"The Grammatical Introduction to the London Pharmacopoeia is free from all objection, and is a very useful little Book for smoothing the crabbéd technicalities of that Alcora of our therapeutical faith."
 —Medico-Chirurgical Review, April, 1842.

"This little Work will be found extremely useful to Students who have received but an imperfect classical education."—Lancet, November 30, 1839.

H. HUGHES, 15, St. Martin's-le-Grand.

ROYAL COLLEGE OF SURGEONS IN

LONDON.—The Catalogue of the Specimens of Urinary Calculi in the Museum of the College, about 600 in number, illustrated by Twelve Engravings; plain or coloured as may be desired; is now in the press, and will be delivered to Members of the College at the cost of the Paper and Letter-Press only, no charge being made for the Plates unless Coloured.

Members desirous of possessing a Copy, are requested to send their names to the Secretary, at the College, on or before the 10th of May next, in order that the number of copies necessary to be printed off may be in some measure ascertained.

The first Volume of the Transactions of the College will shortly be published and will be sold to such Members, at cost price, as shall transmit their names to the Secretary on or before the 10th of May next.

By Order,

EDMUND BELFOUR, Secretary.

PROTECTION, EASE, AND COMFORT FOR TENDER FEET.

HALL and Co., Wellington-street, Strand,
 London, Sole Patentees of the PANNUS CORIUM, or LEATHER CLOTH BOOTS and SHOES for Ladies and Gentlemen. These articles have borne the test and received the approbation of all who have worn them. Such as are troubled with corns, bunions, gout, chilblains, or tenderness of feet from any other cause, will find the softest and most comfortable ever invented; they never draw the feet or get hard, qualities which strongly recommend them to Merchants and Shippers for warm climates, where they are found easier and more durable than any other kind of shoes; they resemble the finest leather, and are cleaned with common blacking. The material sold by the yard in any quantity. Also, the much-improved Patent India Rubber Goloshes are light, durable, and perfectly waterproof; they protect the feet from damp and cold. Hall and Co.'s Portable Waterproof dresses claim the attention of all who are exposed to the wet. Ladies' Cardinal Cloaks with hoods from 18s. Gentlemen's Dresses, comprising Cape, Overalls, and Hood, 21s.; the whole can be carried with convenience in the pocket. The Shoes or Goloshes can be fitted by sending a shoe and the waterproof dresses by the height of the figure.

HALL and Co. beg to inform BOOT and SHOE-MAKERS that they can be supplied with any quantity of the Pannus Corium, or Leather Cloth, from one yard and upwards, the cost of which can be sent by Post-office Order.

ROYAL COLLEGE OF SURGEONS IN

LONDON.—A LECTURE on the FOSSIL REMAINS of EXTINCT ANIMALS, especially of the two newly-discovered QUADRUPEDS—the Mylodon and Glyptodon—will be delivered in the Library of the College, by Professor Owen, F.R.S., on Wednesday, the 4th of May, at 9 o'clock in the Evening.

Tickets of Admission to which will be delivered to Members of the College upon personal or written application to the Secretary at the College.

By Order,

EDMUND BELFOUR, Secretary.

TO THE MEDICAL PROFESSION.

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COURSE OF CLINICAL LECTURES ON PNEUMONIA.

Delivered at the Hospital La Charité, by Professor CHOMEL.

SYMPTOMS OF ACUTE PNEUMONIA.

Critical perspiration.—It has from the earliest times been remarked, that, in some cases, copious perspirations have been followed by a rapid and favourable change in the symptoms of the pneumonia, and have thence been considered as critical. *Ut plurimum per sudores terminatur peripneumonia.* (P. Frank.) Very frequently, says Cullen, resolution is accompanied and perhaps produced by a copious perspiration, which exudes freely from the whole surface of the body, and which is attended by a diminution in the frequency of the pulse, the heat of the body, and the other febrile symptoms. According to M. Andral "there is no disease in which the existence of the critical perspiration seems more perfectly shown than in pneumonia." This perspiration, he adds, cannot be considered as an effect, since, before the appearance of the critical phenomena, we most frequently observe a momentary exasperation of the symptoms. If the diaphoresis were an effect, the amelioration would precede its appearance. But we must not confound the critical perspirations above described, and which are an indication of a favourable change, sudden and often unlooked for, with that usually moderate transpiration which in some cases continues throughout the whole course of the pneumonia, and which, also, is generally a good symptom. We should especially avoid confounding them with those partial sweats of a tepid or even cold character, which announce the greatest danger to the patient.

Critical expectoration.—Does crisis by expectoration take place? and what are its peculiar characters? These are questions upon which there is a great difference of opinion between ancients and moderns. The ancients have asserted that the most favourable crisis is that by expectoration, and that the other evacuations are not of the same importance; thus they augured badly of dry peripneumonias in which the sputa were harsh and scarce. Huxham considers with Hippocrates, that expectoration is a natural crisis; the more abundant the expectoration, the better hope for the patient. Boerhaave and Van-Swieten held the same opinion. According to Cullen, the evacuation which accompanies and appears most favourable to resolution is the expectoration of a thick, white or yellowish matter, marked by some streaks of blood; a matter which becomes evacuated in considerable quantities, without exciting violent or very troublesome cough. P. Frank also considers crisis by expectoration to be of very frequent occurrence. Quarin says positively that the most common crisis is that by expectoration; he adds, that the most favourable sputa are those which, being at first yellow, mucilaginous, and streaked with blood, become afterwards white, and the excretion of which is attended by an improvement in the pulse and the respiration. At the present day, authors entertain very different

views on this subject from the ancients. Some, it is true, affirm the existence of crisis by expectoration: thus Leroux admits that when peripneumonia terminates by crisis, it is most frequently by means of expectoration, which then becomes copious and continued; but other authors, M. Andral in particular consider the expectoration merely as an effect of the pneumonia, presenting the same relation to this affection as the pus formed on the surface of serous membranes does to inflammation of those structures. New researches are consequently requisite to enable us to decide on the existence and importance of this phenomenon.

iv. Critical Diarrhœa.—The ancients seem to have been divided in opinion, as to the good or bad augury of this symptom in pneumonia; some considered it a serious aggravation of the disease; "*à pleuritide, aut à peripneumoniâ defento, alvi fluxus superveniens malum,*" says Hippocrates. Others again viewed it in a very different light: Quarin, for instance, admits that in all acute diseases, when the stools are of a yellow appearance, strongly resembling pease-soup, we may with confidence predict the speedy convalescence of the patient. Bordeu, speaking of this kind of evacuation, says that it is the sign of the victory of nature, and, as it were, the dawn of health. According to P. Frank, the termination by diarrhœa is scarcely ever observed but in pneumonia complicated with some gastric affection. Some authors, as Valeriola, Lusitanus, &c., have spoken of finding pus in the alvine dejections and also in the urine; but Hoffman, without denying the possibility of the fact, believes that these authors have fallen into error, from the sediments of the urine, in particular, sometimes simulating purulent matter. The following case, which is cited by M. Andral, possesses great interest.

A jeweller, 29 years of age, entered *La Charité*, labouring under a right pleuro-pneumonia of three days' duration, which had commenced by a violent shivering fit, pain in the right side, cough, and dyspnœa. On the second day, the shivering was succeeded by great heat of skin which had persisted ever since; the pain in the side still continued, and the dyspnœa had augmented. On the third day he was seen by M. Andral. On the right side of the chest, in the part corresponding to the inferior lobe of the lung, the crepitant râle was easily distinguished, but still it was not sufficiently strong to mask completely the respiratory murmur. This part of the chest resounded rather less on percussion than the opposite side. The sputa were rusty, transparent, and viscid; there was intense febrile excitement; the tongue was rather red; the abdomen soft and doughy; the stools natural. (20 leeches to be applied over the seat of the pain. To be bled to 16 ounces. Emollient drinks.) The next (4th) day, the pain in the side had disappeared; the other symptoms continued. The blood was buffed. (To be bled to 12 ounces.) Fifth day, no alteration in the dyspnœa, the cough, or the rusty-coloured sputa; the signs furnished by percussion and auscultation continued the same. Pulse very frequent and resistant; skin hot and dry; tongue white, and rather red along the edges; great thirst; constipation. (15 leeches to the anus.) On the morning of the sixth day, there was slight disturbance in the intellectual faculties, the face was flushed; the other symptoms continued the same. In the course of the day there was great agitation, with a remarkable increase of the dyspnœa. In the evening, spontaneous diarrhœa occurred. The bowels were moved 10 or 12 times during the night. The motions were at first composed of hard and fetid matters, subsequently giving place to a large quantity of serous liquid of a pale yellow colour. On the morning of the seventh day, the patient, far from being fatigued by this abundant discharge, was on the contrary infinitely better

than the day before; the respiration appeared free; the crepitant râle had almost entirely given place to the natural bruit of the respiration; the chest resounded well throughout; the sputa were no longer tinged with blood; the febrile movement had almost entirely disappeared, convalescence speedily took place, and in a few days he was quite well. The diarrhœa continued for four-and-twenty hours.

We cannot refuse to consider the purging in this case as critical; in fact, it supervened upon a remarkable exasperation in the symptoms, and was immediately followed by an unexpected amelioration, which soon terminated in a complete and rapid cure. At other times the diarrhœa which supervenes towards the termination of pneumonia, without being very abundant or offering the characters of a true crisis, seems to favour and gradually bring about the resolution of the disease; thus forming, according to the expression of Galien, a sort of *solution* of the disease, without being a true crisis. But diarrhœa arising in the course of pneumonia is not always a favourable sign; it is frequently symptomatic of enteritis of greater or less intensity which forms a serious complication of the original disease, either in a direct manner, by suppressing the expectoration, by greatly weakening the patient, and thus preventing the free employment of venesection as required by the pulmonary affection, or lastly by counter-indicating the employment of some remedies, tartar-emetic in particular.

v. Critical Hæmorrhage.—A more or less abundant hæmorrhage occurring in the course of pneumonia has sometimes been followed by speedy resolution, and has thence been considered as critical. The respiratory passages, the nasal fossæ, the urinary or genital apparatus, and the large intestine have, according to some authors, each been the seat of this affection. A young man, sixteen years of age, was affected with peripneumonia; the persons about him, not understanding his disease, caused him to take a glass of brandy. Dr. Mathy was called to him when the inflammation was at its highest degree of intensity. About two hours elapsed before he could employ blood-letting. During this time a violent hæmoptysis occurred. The quantity of blood thrown up was so great, that it inundated the whole chamber, from the bed to the door. Immediately after this hæmorrhage, the patient was freed from his disease. Dr. Mathy, some time afterwards, saw this young man who maintained the most perfect health. Bronssais, according to Dr. Duquesnel, has also in his lectures cited an instance of pneumonia terminating by resolution after an attack of hæmoptysis. *Epistaxis*, according to some authors, sometimes presents all the characters of a critical flux. Zacutus Lusitanus relates the case of a young man, the subject of catarrhal affections, and in whom the mouth, the nares, the gums, and palate, were often the seat of pustules which gave rise to an acrid discharge, who was attacked with pneumonia. The symptoms were exceedingly marked; the respiration was greatly hurried; the patient experienced *cardialgia* and great pain in the right side; the thirst was excessive; there was great want of sleep; the greatest anxiety was felt for the patient, and death appeared imminent, in spite of the remedies employed. On the seventh day the patient appeared dying, when suddenly a nasal hæmorrhage supervened of so copious a character, that the patient lost more than three pounds of blood in six hours; this evacuation rendered the respiration more free and the expectoration more easy; sleep returned, the urine presented the characters of *coction*, and the patient was perfectly well on the seventeenth day. Zacutus Lusitanus relates also the case of a young man affected with a left pleurisy, which continued in spite of the ordinary

remedies, who lost, towards the eleventh day of the disease, two ounces of blood from the left nostril; the fever having increased, a small quantity of blood was drawn from the left arm. Towards the fourteenth day, an abundant discharge of blood took place by the *urinary passages*, and continued for forty-eight hours; the fever declined, and the young man got perfectly well. Galien, Paulus, Avicenna, &c., also held that the crisis of diseases of the chest may take place by urinary hæmorrhage, and M. Latour, of Orleans, has likewise instanced a case of this kind. Forestus speaks of a *menstrual flux* serving as a crisis to an affection, which from his description appears to have been a pleuro-pneumonia. Lastly, *hæmorrhoidal hæmorrhage* seems to enjoy a similar rank among the class of crises, as instanced in several recorded cases.

VI. Exanthemata, pustules, boils, and critical abscesses.—Various exanthemata, pustules, carbuncle and abscesses arising towards the termination of pneumonia have been considered by several authors as critical phenomena. Thus, according to P. Frank, the exanthemata and vivid pustules which appear on the surface of the body, especially a well-marked attack of erysipelas, have sometimes caused the disappearance of peripneumonia, more particularly when of a low character. Borsieri has often seen a favourable change induced in peripneumonia on the fourth or the seventh day, or even sooner, by an eruption of miliarial vesicles. Leroy has made the same observation. Boils and abscesses formed in different parts of the body belong to the same class of symptoms.—*Abcessus qui ad crura fiunt in pulmonis vehementibus ac periculosus, omnes utiles.*—*Optimi potissimum sunt abcessus inferni et longissimi intra ventrem, et remotissimi à morbo sunt.* (Hippocrates.) P. Frank states that he has rarely observed critical abscesses in peripneumonia, but that he has sometimes seen critical formations of matter take place from the ears. According to Quarin, the salutary deposit of matter, which is sometimes formed in peripneumonia, takes place most frequently in the parotid glands or in the lower extremities, rarely or never elsewhere. When these abscesses suddenly disappear, the patient is placed in the greatest danger, unless some critical evacuation quickly succeed them. According to Vogel, the abscesses which arise under the arm-pit or elsewhere are of favourable augury; it is rare that pus escapes from the ear; where this takes place, the discharge has been preceded by violent earache. These various assertions, which might be easily multiplied, are but feebly supported by modern observations; but we must repeat that the study of crises is now-a-days greatly neglected, and it is possible that numerous facts which may be favourable to this doctrine are passed over unperceived. No observation of this kind has, however, been presented to my notice in this hospital, nor has M. Andral ever met with any such case; this circumstance renders still more interesting the two instances related by Dr. Condret, for the details of which I must refer the reader to his essay.

VII. Secondary phenomena.—M. Louis has, in a particular manner, directed the attention of pathologists to the various lesions presented by organs more or less distant from that which is primitively affected, and which often appearing some time from the commencement of the principal affection, have thence been denominated *secondary phenomena*. These lesions, according to M. Louis, cannot be considered as essentially belonging to the primitive disease, for they are observed only in a certain number of cases, nor can they be considered as simple complications, for this would indicate the two affections to be independent of each other: now, the secondary lesions are so dependent on certain affections, pneumonia in particular, that we may, from the existence of the primary affection, confidently predict the occurrence of the secondary. Nor again can the secondary phenomena be considered as critical; in fact, they commonly show themselves at a period distant from the decline of the disease and from convalescence; when amelioration exists, it does not coincide with the appearance of these symptoms, which are more frequent and more grave in fatal cases than in

those which terminate favourably, and are usually proportioned in their intensity to the gravity of the disease itself. Lastly, these phenomena cannot, according to M. Louis, be considered as sympathetic, but want of space prevents my bringing his considerations on this subject under your notice. Secondary phenomena are generally more numerous and more grave in the course of peripneumonia and of typhoid fever, than in any other disease. Among the secondary lesions which are found in fatal cases, is a diseased condition, usually of an inflammatory character, of the mucous membrane of the stomach and intestine. Lesions of this structure are certainly found in other acute diseases, as pleurisy, pericarditis, the exanthemata, ramollissement of the brain, &c.; but they are generally less frequent and less grave in these diseases than in pneumonia, and especially in typhoid fever. Some diseases of the spleen, of the gall-bladder, and a croupy inflammation of the air-passages, &c., are also considered by M. Louis as secondary lesions; and he further states that he has scarcely ever met with them but in individuals who have sunk under pneumonia or typhoid fever. In fine, M. Louis, after examining the whole of the viscera of subjects who have died of various febrile affections, has always found that the secondary lesions are more frequent, more grave, and more varied in typhoid fever and in peripneumonia than in any other disease; that they are more marked in typhoid fever than in peripneumonia, and in acute diseases with intense febrile excitement than in those maladies where the fever is less developed; also that the frequency and gravity of these lesions are generally proportioned to the intensity of the fever. The secondary phenomena observed in those patients who become cured of any acute febrile disease, confirm the results furnished by an examination of the fatal cases. Thus, *cynanche* of a more or less acute character existed in two-thirds of the subjects affected with some grave typhoid disease; in one-third of the cases where this fever had been slight, and in a seventh part of the peripneumonic patients; but this affection of the throat was less frequent in the course of other acute diseases, and always in proportion to the febrile movement; it commenced five or six days, at most, after the principal disease. Nausea, bilious vomiting, pain in the epigastrium, and the other symptoms indicative of an inflammatory affection of the stomach existed in a third part of the cases of grave typhoid fever, in a sixth part only of those in whom the fever was of a milder character, and in a sixth part of the individuals affected with peripneumonia; less frequently in other inflammatory affections, but generally in proportion to the febrile excitement; these symptoms showed themselves about the same period as the inflammation of the throat. The symptoms of enteritis, the various eruptions of the skin, such as erysipelas, eczema, psoriasis, erythema, &c., which are developed in the course of acute diseases, and which also are considered by M. Louis as secondary phenomena, are proportionally more grave and more frequent, as the febrile movement is more intense; they appear at the same period as the preceding. Thus we here find another confirmation of the law previously mentioned, as to the dependance of these symptoms upon the intensity of the febrile excitement, and consequently their greater predominance in those subjects who have sunk under some acute disease. Another observation of equal importance, and which gives a striking support to the preceding opinion, is that in acute diseases unattended by fever, *colica pietorum* for instance, or in chronic affections without any febrile movement, the secondary phenomena are entirely absent. From these considerations M. Louis makes the secondary lesions or phenomena to depend, in a great measure at least, upon febrile excitement. This fact being established, it follows that we should be prepared to expect the development of some of these secondary lesions in every case of peripneumonia, especially if the febrile movement be intense, and that we should apply ourselves to treating the primary affection as quickly and as energetically as possible, with a view of preventing, among other things, the development of the secondary lesions, lesions which might of them-

selves prove mortal; in the second place, it will be necessary to omit from the treatment whatever might augment the intensity of the febrile movement. We shall return to this subject when speaking of the application of blisters in the treatment of pneumonia. These secondary phenomena become then of great importance with a view to the prognosis as well as the treatment of this disease.

VIII. Convalescence of Pneumonia.—Convalescence from an attack of pneumonia progresses with remarkable rapidity, strongly contrasting with that from typhoid fever for instance. But we must always be on the guard against that *deceptive convalescence*, where the condition of the patient remains stationary for some variable period, without being followed by a perfect cure, and in which the resolution of the disease is retarded by some remnant of pneumonic engorgement, pulmonary œdema, or by tubercular deposition. Ordinary convalescence presents various phenomena which, being misunderstood, might unnecessarily disturb both physician and patient, and even induce the former to adopt an injurious treatment. I will therefore remark, in the first place, that when the disease has been of long duration, and the patient has become weakened by loss of blood and by a strict regimen, the pulse maintains a frequency which might erroneously lead us to imagine the continuance of the febrile excitement; but we shall be quickly undeceived by seeing the pulse become fuller and less frequent in proportion as the patient grows stronger from the use of nutritious diet. A second order of phenomena belonging to convalescence, and upon which I cannot too much insist, is the following: the patient has neither fever nor dyspnoea, he eats well, digests easily, and regains his strength and flesh, and still we shall, on careful auscultation, discover, in the regions previously affected, some points of crepitation or of bronchial respiration. These phenomena depend most usually on the œdematous engorgement, which succeeds the proper inflammatory engorgement, and which may be compared to the œdema presented by the skin after an attack of erysipelas. This engorgement remains for a variable time; thus in fifty patients treated in 1836, it remained in some 23, and in others 33, and even 35 days. What are the circumstances which induce this condition of the lung? Treatment appears to have no influence in this respect, since the patients above spoken of had been treated in some cases by moderate blood-lettings, and in others by copious and repeated venesection. The advanced age and deteriorated constitution of the patient, on the contrary, appear to be the principal causes of the delay which occurs in the return of the pulmonary parenchyma to its normal condition; in fact, the subjects in whom this morbid state was most prolonged, were, at a mean term, 50 years of age, and were generally of a feeble constitution. Thus, then, as a general and perhaps constant rule, the fever ceases first, while the physical signs remain for a variable period. The trifling dulness on percussion, and the slight crepitant râle which continue after the disappearance of the other pneumonic symptoms, deserve the attention of the practitioner, since any imprudence in diet or a chill might give to the disease a new degree of activity, and thus cause a *relapse*; in these cases the progress of the pneumonia will be excessively rapid, and will almost invariably resist all the resources of art, the patient being already too much enfeebled to support an active treatment.

When speaking of *auscultation*, I pointed out to you the *supplementary* respiration which becomes developed in those regions of the lung which have been previously invaded by inflammation, and in which perfect resolution has taken place, and I then told you that this *supplementary* respiration, which is a sign of convalescence, must not be confounded with that form which is heard in the neighbourhood of some impermeable portion of the lung.

EXTRACT OF TARAFACUM.—This medicine is often useful in cases where mercury is inadmissible, and has a very good and salutary effect in cases of *ascites* in combination with *SQUILLS* and *DIGITALIS*.

HOMŒOPATHY.

IN my former article I explained the fundamental principle adopted by Hahnemann as an universal law of medicine. I will now proceed to describe the method which an experience of sixty years has sanctioned in the preparation and administration of homœopathic remedies. When the founder of this system had convinced himself that the law of similars was the only proper guide in the treatment of disease, he began by administering therapeutic agents in the usual doses, but he soon found that by following this plan, the symptoms of the malady were very greatly, and even seriously aggravated, so that he was obliged to diminish the quantity of medicine lest he might postpone, or even altogether jeopardize, the cure. He observed, that in all instances the primary effect of his medicines was to bring the pathological phenomena more distinctly and prominently to view, and that provided the additional disturbance of the functions which had been thus artificially superinduced was not in excess, it resulted in awakening the reactive powers of nature, which then succeeded in regaining her normal sway over the constitution. It evidently followed from this that it was a matter of the highest importance to determine what amount of therapeutic disturbance was necessary in order to bring the energies of nature into play against the pathological disturbance arising from the malady; and it is clear, the smaller the amount of the former disturbance, the better for the safety and well-being of the patient, for it must be always remembered that remedies are, in their essence, inimical to health, the object of their administration being not to *heal*, but to provoke the healing powers of nature. Hahnemann, after a long course of experimental essays, established the various degrees of force with which it is expedient to invest these provocative agents, so as to be just sufficient to discharge the duties of their ministry with effect, and at the same time be too feeble to exercise any injurious influence foreign to their office. These are the considerations which led to the gradual diminution of therapeutic doses. Homœopathy does not assert that all remedies must necessarily be administered in infinitesimal quantities; it simply declares that the strength of the dose should be proportioned to the effect which it is intended to produce, and that when remedies are employed according to the law of similars, an exceedingly small amount of the remedial substance has been found by experience to be sufficient to act upon the economy, so as to cause nature to react upon the malady.

Homœopathic medicaments, like all other medicaments, are derived from mineral, vegetable, and animal substances, and the following is the ordinary process of their preparation:—The druggist takes a portion of the substance containing the therapeutic element, such as a salt, the expressed juice of vegetables, &c.; this portion undergoes a long course of mechanical manipulation, such as friction, granulation, &c., which has the effect of greatly modifying the force of physical aggregation between its particles, and therefore of materially altering its properties as regards its calorimetric and electrical condition. It is certainly difficult by mere mechanical attrition, to overcome the force of chemical attraction among the ultimate atoms of a body; but even in this respect the component elements may be often sensibly perturbed by friction, as when coloric is developed by rubbing together two pieces of dry wood, and electricity by rubbing an electrophorus. When the therapeutic substance has been thus prepared, a part of it is mixed with a hundred parts by weight of pure alcohol, and in order to promote an intimate union, the admixture undergoes a long process of succession; the result constitutes what homœopathy calls a tincture of the first dilution. A part of this dilution is then taken and mixed in a similar manner with a hundred parts of pure alcohol; the result is a tincture of the second dilution. A part of this is again taken and mixed as before with a hundred parts of pure alcohol, and the result is a tincture of the third dilution. This operation being continued to the thirtieth dilution, and upwards, affords the various mother tinctures which are employed to impregnate the homœopathic

globules. These globules are commonly made by merely mixing a little sugar of milk with any given tincture, and reducing the mass into small pillules about the size of mustard-seed, and are administered dry, or dissolved in water, according to the judgment of the physician. Now, is it possible that one of these minute globules can produce any sensible effect whatever upon the constitution? To show the inconceivable rarification of the therapeutic virtue in the high dilution, let us suppose that one part of a substance is mixed with nine parts of alcohol, forming the first dilution; one part of the first dilution mixed with nine parts of alcohol, forming the second dilution, &c.; the substance will be rarified according to the following descending geometrical ratio:—1-10th, 1-100th, 1-1000th, 1-10,000th, &c. Manipulate a grain of nux vomica according to this process, the thirtieth dilution will contain only the nonillionth part of a grain of that substance; this dilution, amounting to ten grains in weight, is sufficient to impregnate many thousands, or even millions of globules, each of which will contain some material portion of strychnine. But is not that portion so small in quantity that it can scarcely be considered anything more than one of the ultimate atoms of that body? and is it reasonable to believe that a mere invisible, inappreciable atom can produce any sort of therapeutic effect upon the animal economy? I must confess that a belief in such a phenomenon without positive ocular demonstration, and that repeatedly shown in many individual instances, would be a palpable sign of easy and impotent credulity. But if there is such a thing as a demonstration, if experience verifies the truth of it by many incontestible facts, and if these facts can be again produced in ordinary practice, credulity becomes then supported by credibility, and every sceptical resistance of the mind must of necessity yield to conviction grounded upon observation. There is doubtless no effect produced without a sufficient cause for its production; but we often perceive very striking effects in nature, the causes of which are either wholly unknown, or apparently very inadequate for such a purpose. The poison of the plague is so exceedingly subtle and attenuated, and yet so virulent in its essence, that the moment any susceptible matter is brought into contact with the body wherein it is lodged, an infinitesimal stream of it escapes into that matter, as when a current of electricity seizes upon a metallic conductor; and in this manner half an ounce of cotton infected with the pestilential virus, would probably be sufficient to communicate the disease in succession to every susceptible individual on the face of the earth, though it would lose no appreciable weight by the communication. The miasmatic poison which enters into the body in endemic or epidemic fevers is too minute to be weighed in a balance, or to be observed with a microscope, and yet it is sufficient to produce dreadful ravages in the living economy. The exhalations of certain odoriferous substances, such as musk or flowers, are often dangerous, and have sometimes proved fatal to persons of a nervous excitability; but the amount of matter inhaled in these cases is less than any ponderable quantity. Even moral influences, such as sudden fears, joys, &c., are often followed by serious consequences, which lay the foundation of permanent disease in the constitution, or even terminate in immediate death; but no one thinks of estimating the intensity of these influences by weight and measure. Since, then, in numberless instances, infinitesimal, and even immaterial agents have the power of controlling, or even completely subverting the dynamic laws of life, homœopathy considers that there is nothing peculiarly strange in the circumstance that a therapeutic element, however small in weight and magnitude, should be nevertheless endowed with a specific virtue, capable of modifying in a sensible degree the transcendental forces of vitality; and it considers, moreover, that a medicinal agent must exert its real power, not upon the laws which regulate the physical and chemical formation of the body, but upon those higher attributes, those hyper-physical functions which belong solely and exclusively, both in health and disease, to its vital organization.

CAMBRENSIS.

[We have not objected to publish this paper, be-

cause it gives, what we much wanted, an interesting account of the reasoning by which the Homœopaths support a theory which, despite our correspondent's bias, we cannot but consider as most mischievous in practice. That homœopathy has produced some good by the investigations it has led to, we should be sorry to deny. Hahnemann's followers in this particular are perhaps to medical science what the alchemists were to chemistry, but the whole effect of all their ingenious reasoning in favour of their system as a system for practical use, is just to prove what the poet long since noticed, how possible it is—

insanire eum ratione.

Ed.]

THE MEDICAL ASSOCIATION OF THE NORTH OF ENGLAND.

THE annual meeting was held on Tuesday last, in the lecture-room of the Literary and Philosophical Society, Newcastle-upon-Tyne. There were several non-professional gentlemen present, the meetings of the North of England Medical Association being open to the public.

Dr. Headlam, the President, having taken the chair, said, that he might mention, as a source of congratulation, the interest which the question of medical reform had excited in the profession throughout the kingdom, and the good feeling which had been established by this institution with similar bodies, and for which the members were indebted to the zeal and talents of their indefatigable secretary. But not only had the profession been awakened to a spirit of enthusiasm, and the good feeling which existed amongst medical men cemented and increased—the non-professional public, too, had been led to take an interest in the subject of Medical Reform—many Members of the Legislature were now aware of its importance—and a Cabinet Minister had undertaken to bring a Medical Bill before the House of Commons. Those who were acquainted with the slow progress of legislation, upon all matters which did not come directly home to the interests of those who held the largest share of legislative power, must be convinced that the measure would have to make its way to the under-standings of influential Members of the Legislature, before any real progress could be made; and it must be regarded as a great matter, that a Principal Secretary of State had undertaken to introduce a Bill into Parliament. He (the President) would not, however, conceal from them, that the Bill which they were led to expect from Sir James Graham, was not a measure that ought to satisfy the profession. He feared that the Home Secretary had too close an intimacy with existing corporate bodies, who had so long held the power intrusted to them, without sufficiently extending the reputation and usefulness, or protecting the interests, of the medical profession. But let the subject be once brought fairly and authoritatively before Parliament, and a full discussion take place, and a measure founded on truth and justice must prevail. It was of great importance that the members of this Association should keep steadily in view the principles for the promotion of which they had combined together—principles involving, not petty private interests, but such as were of great public importance; and they should bring them under the consideration of all with whom they came in contact, without distinction of class or of party, that a knowledge of the objects of their Association might be diffused throughout society. The first of these objects was the formation of some central body—some board or council—constituted, partly or entirely, on the representative principle, so that it might possess the confidence of the profession at large, and the confidence also of the public. A Board of this kind would not only frame regulations for the education, interests, and character of the profession, but also for the health of the country. Those who remembered the sad visitation, a few years ago, in this district, of a disease of which the profession had no previous experience, must know that instructions of the crudest nature came down to them, and which after experience showed to be most un-

wise and improper. Upon the recurrence of such an emergency, the Board to which he had alluded might be called into action with the most beneficial results. It was essential, further, to the usefulness and respectability of the profession, that the qualification for its exercise be well defined. It was quite clear that there must be a license to practise, and such license must proceed upon some qualification. Every man ought to possess a competent knowledge both of medicine and surgery, before the State intrusted him with the life of a fellow-creature, whether rich or poor. The uniform qualification for which Medical Reformers contended, had been much misunderstood by professional men, jealous of their rank and title; but such a qualification would interfere neither with degrees nor titles of individuals, nor the privileges of colleges or universities to grant them. All that was contended for was, that a *minimum* qualification, uniform over all the kingdom, should be established by law, founded upon the same *curriculum* of study, and ascertained by the same examination. The possession of this qualification would give a right to a license to practise. It would not, of course, prevent any practitioner from devoting himself especially to medicine or to surgery, or to both, if he were so inclined; nor would it restrict him from taking a degree or title, or aspiring to medical honours of any character whatsoever.

Mr. C. T. Carter, Hon. Secretary, read the Report of the Council, of which the following is a copy:—

"The Council, in presenting a Report of their proceedings during the past year, have sincere pleasure in being able to congratulate the members of the North of England Medical Association on its prosperity, and on the steady support of the Profession which it continues to receive. They hope that the statement they have now to submit to this meeting, will show that they have not been unmindful of the trust confided to them, and that during their term of office they have been anxious to promote, to the utmost of their power, the several designs for which the Society was established; and, in particular, that the primary object of the Association—namely, that of co-operating with other Professional Bodies in the endeavour to obtain an amendment in the laws and institutions connected with the Medical Profession in Great Britain and Ireland, has not been disregarded. The Council have taken every opportunity of advocating the claims of the Profession to the notice both of the Government and the Legislature. The Report adopted at the anniversary meeting held in April, 1841, was printed and extensively circulated. The petitions in favour of Medical Reform, and for an amendment of the system of Parochial Medical Relief, were duly presented to the House of Commons; all the Members of Parliament connected with the counties of Northumberland, Durham, and Cumberland, and several others, having at the same time been requested to support the prayer of these petitions. The circumstances attendant on the close of the session of Parliament in June, 1841, having precluded the consideration of medical affairs by that Parliament, the Council urged the members of the Association to impress upon candidates at the General Election the importance of Medical Reform as a question involving the welfare, not of the Medical Profession alone, but of the society at large. They have reason to believe that many of our legislators are now alive to the importance of the subject. Many have pledged themselves to give it their serious consideration; and there is ground for hope, that when again introduced to the notice of Parliament, it will not fail to meet with an adequate degree of attention. The Medical Reform Bills which were promulgated during the last two years having been laid aside, your Council, unwilling that any relaxation should take place in the efforts of the reforming part of the Profession, and desirous to gather as clearly as possible the sentiments of the Association upon the details of a plan for the better regulation of medical affairs, appointed, in the month of June, a committee to consider the different plans which had been already produced, and to lay before the council such suggestions as might occur to them in connection with

their inquiry. After due consideration, the committee deemed it advisable to submit *two* outlines of plans; and upon the respective merits of these, the council were desirous to take the sense of the members at their general meeting held at Durham in October last. The outlines were printed in the circulars which were sent to members previously to that meeting. It was, however, considered by the meeting unnecessary to decide upon them at that time; and recent circumstances, which will be more particularly adverted to in another part of this report, have arisen to obviate the necessity of bringing the plans under review at the present meeting.—In the month of July, Dr. Brown, of Sunderland, and Dr. Charlton, of Newcastle, were appointed a deputation to meet the Provincial Medical and Surgical Association at York. The latter gentleman was prevented attending, by a severe and protracted illness. Dr. Brown gave his support to the reform measures advocated by that association, and urged the propriety of a full and free co-operation of the different associated bodies, in furtherance of their efforts to obtain for the United Kingdom an amended system of medical polity. The unanimous thanks of the council were given to Dr. Brown for his services. At the general meeting in October a copious report was read of the transactions of the council since their appointment in the month of April preceding. In this document, various points, illustrative of the existing state of the profession, were discussed. Other business of considerable interest occupied the attention of the meeting. A motion was made relative to the admission of non-medical gentlemen as honorary members of the association; a committee was nominated to report on the present mode of appointing medical and surgical officers to hospitals and other public charities; and a petition relative to certain alleged defects in the Anatomy Act was referred to the council. No steps have hitherto been taken in reference to the last of these subjects, circumstances having arisen to induce a belief that the principal grounds of complaint stated in the petition were likely to be removed. Should such, however, not be the case, the question might (with the sanction of this meeting) be again considered by the council. The propriety of admitting non-medical gentlemen as *honorary* members of the association has been discussed, and the *principle* of such admission acquiesced in by the council. The regulations under which it would be proper to admit lay members have not been decided by the council, and their further consideration will depend on the course which this meeting may think proper to take in regard to the proposition. In the month of January, your council prepared a memorial to the Secretary of State for the Home Department, relative to the present state of the medical profession—300 copies of which were printed for circulation. The memorial was transmitted to Mr. Hodgson Hinde, M.P., who, at the request of the council, obligingly consented to place it in the hands of Sir James Graham. As on former occasions, so also on the present, the council have to state, that, agreeably with one of the fundamental principles of the association, an active correspondence has been carried on, throughout the past year, with various medical associations, as well as with other parties who take an interest in the question of medical reform. Amongst these may be mentioned the names of Dr. Kidd, of Oxford, Mr. Carmichael, of Dublin, Dr. Barlow, of Bath, Dr. Hastings, of Worcester, Mr. W. Wood, of Edinburgh, Dr. Webster, of Dulwich, Mr. Ceely, of Aylesbury, Dr. Jeffreys, of Liverpool, &c., &c. The council have been glad to perceive, within the last few days, some indications of improvement in the system of poor-law medical relief. The commissioners have lately issued a 'Medical Order,' the main features of which consist in the fixing a maximum of area and population for districts, and the institution of a permanent pauper list. The medical attendants are to hold office *permanently* instead of *annually*, and are to possess a double qualification in medicine and surgery. The system of 'Tender' is to be abolished, and an extra remuneration allowed for surgical operations and midwifery. The 'Order' is of too recent date to admit of the council giving an opinion upon its several heads in this report.

They would beg, however, to remark, that in defining the qualification of the medical officers, an unjust restriction has been placed on the graduate of Scotch and Irish Universities, and on the members of the Colleges of Surgeons of Edinburgh and Dublin. After the strenuous exertions made in the cause of medical reform within the last few years, by a large proportion at least of the profession, it cannot be otherwise than gratifying to this and other kindred associations to know, that the subject has at length attracted the attention of Government. During the early part of the present session of Parliament, Sir James Graham, as members are well aware, announced his intention to bring into the House of Commons a Bill for the better government of the Medical Profession. The council are not provided with an outline of the proposed measure, but the bare announcement that a medical bill is likely, at no distant period of time to be introduced into the Legislature by a Minister of the Crown, affords a gratifying proof that the importance of the question of medical reform has been recognised in the proper quarter, and should act as a great encouragement to those parties who have toiled in the cause to continue their efforts showing, as it does, that their past exertions have been neither visionary nor fruitless. The contents of the anticipated bill have not yet been made known to the profession, although the heads of it are said to have been communicated to the authorities of the Colleges of Physicians and Surgeons of London. The council are consequently not prepared to lay before this meeting any definite information respecting it. Rumours as to its provisions are not, however, wanting; and as these have in certain quarters, been made with considerable confidence, they must not be allowed to pass entirely unnoticed in this report. The council hope, at the same time, that the result may prove the said rumours to have been somewhat premature, and not altogether correct, and that a measure so little in accordance with the feelings and wishes of nearly the whole professional body, and of such questionable efficacy as regards the well-being of the community, as report has attributed to Sir James Graham, may not be brought into Parliament with the sanction of Her Majesty's Government. It is not to be supposed that a plan of medical reform can be acceptable to the profession which would concentrate the whole governing power of that profession (for England at least) in the Colleges of Physicians and Surgeons of London, even with such alterations in the constitution of those bodies as have been hinted at in connection with the reported arrangements. The well-earned unpopularity of these colleges, their indifference to the general welfare of the profession, must be known to the Right Honourable Secretary for the Home Department, who was a member of Mr. Warburton's Committee on Medical Education, &c., in 1834; and surely it cannot be intended that they *alone* should furnish the elements out of which is to be constructed a Central Board or Council of Health; whilst the mass of English medical men—the general practitioners of the kingdom—are to have no voice in the election of a body to which is to be intrusted the entire management and control of medical affairs. Neither is it to be imagined that this numerous class will be contented that the licensing power—the power which gives them a legal recognition as practitioners of medicine—should be held by a corporation which is not deemed worthy to form a constituent part of the general board of management. If report be deserving of credit, the triple examination which, consistently therewith, the general practitioner is to undergo, by *physicians, surgeons, and apothecaries*, and the threefold nature of his professional duties, instead of entitling him to consideration, would be made the ground of his exclusion from all participation in the election of the general council—this privilege being confined to those who *profess* to limit their practice exclusively to medicine or to surgery. The plan (as reported) does not aim at preserving that natural unity of the profession which has been so universally acknowledged in modern times. The most eminent members of the profession have agreed that, up to a certain point (and that the commencement of their practical career), the educa-

on of the physician and the surgeon should be the same. No one will, in these days, be found to deny that the physician, although rarely or never required to perform the *manual* operations of the healing art, should nevertheless understand both the theory and practice of surgery; and a knowledge of medicine is even still more indispensable to the surgeon, for it is notorious that the greater part of the practice of those persons, who are designated pure or consulting surgeons, is in medical cases, and no man unskilled in medicine can hope to treat with success those diseases which are usually consigned to the surgeon; and yet, according to the reported ministerial plan of medical reform, no provision seems to exist for testing the medical knowledge of the surgical practitioner.—The inadequately protected condition of the qualified medical practitioner has long been a cause of complaint. His title has been usurped, his privileges have been trenchanted upon with impunity; and such is the anomalous state of medical government in this country, that whilst the impostor is allowed to reap an abundant harvest, the educated physician is unable to recover at law his charge for professional attendance. The protection now enjoyed by the licensed general practitioner, feeble and inefficient though it be, is to be exchanged, according to the reported Bill, for a mere *discouragement* of unauthorized practice. Public appointments are to be held only by the qualified members of the profession, and druggists, like physicians, are not to recover at law charges for medical advice.—The council forbear to pursue this subject in the absence of precise data, and the foregoing observations must be distinctly understood as applying to the outlines of the Bill introduced by Sir James Graham by certain of the medical journals, and other portions of the public press. The council hope that as the measure is not yet completed, and will not, in all probability, be brought forward during the *present* session of Parliament, the Right Honourable Baronet, in attempting to legislate on this momentous but so difficult subject, will not permit himself to be misled by any undue influence, but will summon his councils parties from whom he is likely to receive a disinterested statement of the actual condition of medical affairs, and with whose assistance he may expect to frame a Bill which shall satisfy the reasonable demands of medical men, and be productive of beneficial consequences to the entire population of this great empire.—In the meantime, members of the profession must be vigilant and active; and in order to meet any emergency which may arise during the ensuing twelvemonth, your council have to recommend, at this meeting do authorize their successors in the event to act as circumstances shall require, in reference to medical legislation. They would urge the members of the association, individually, to impress on Members of Parliament the principles of reform which have been advocated by this and other associated bodies, and which have been approved and supported by some of the most distinguished ornaments of the profession—the principles, namely, of—1. A full and fair representation of the professional body in the government of the Medical Corporation, and in the appointment of medical members of any general board or council which may hereafter be formed. 2. A uniform qualification as the requisite for a license to practise medicine, to which branch of it soever the licentiate may more *especially* direct his attention, and irrespective of any degree or title which may desire to possess. 3. Reciprocal privileges for licensed practitioners throughout England, Ireland, and Ireland. 4. A protective power, for the public and the profession, against unlicensed and unauthorized practitioners of medicine or surgery.—These principles, as your council have repeatedly endeavoured to explain, could be put into effect without the abrogation of the existing orders of Physician, Surgeon, and General Practitioner, and without any improper or unnecessary interference with the rights and privileges of the Universities and Colleges of the United Kingdom. Their power to educate students, to grant degrees and diplomas, they would still retain, subject, perhaps, to the control of a general council; and it would be most desirable that

through the instrumentality of such a council, the conditions attached to the granting of degrees, diplomas, &c., should be assimilated throughout the three countries, so that the same title might indicate a *given* qualification, by whichsoever of the Universities or Colleges it should have been conferred. The propriety of such an arrangement has been recognised in a Report published some time since by the Royal College of Physicians in London.—To obtain an improved system of government for the Medical Profession, is not by any means the sole object of this Association. The qualification of the legally-recognised practitioner, and the general direction of medical affairs, may be provided for by the State. The *social* well-being of the Medical Body, the maintenance of its honour and respectability, the promotion of kindly feelings amongst its members, must ever be in the hands of the Profession itself. They are comprised in the scheme of this Association, and have not been overlooked by your council, although, from the peculiar position of public affairs, other objects have hitherto engrossed a larger and more conspicuous share of their attention. The comfort and happiness of the individual practitioner must always, in a great measure, depend on the existence of a proper understanding between himself and his professional neighbours, as to the line of conduct by which they are to be guided in their intercourse with each other; and in a profession the members of which, perhaps, above those of any other, are apt to be thrown into collision, it is most desirable that on this point some clearly-defined principles should prevail, and should moreover be strictly observed. By no means can this end be so effectually accomplished as by a union of the practitioners of a given locality into a society or association. Such unions exist, and often with the most salutary consequences, in almost every class of the community; they are eminently deserving the support of medical men. The various ways in which they might be rendered conducive to the common welfare of the latter, need not here be enumerated. It has long been the opinion of your council, that this association might be made subservient to their promotion; and in former reports the division of the association into *sections* was strongly recommended. Under such an arrangement, each section might watch over the local interests of its members, while the interests of the association as a body, and of the profession at large, would engage the attention of your council, and of members collectively at their general meetings. The council cannot take their leave without repeating their recommendation in regard to this point; and they are happy to state, that immediately subsequent to the last anniversary meeting, the members of the association resident in Sunderland formed themselves into a section, which has held several meetings during the year.—On referring to the list of members, it will be seen that several new and valuable names have been added during the past twelvemonth; but the council are at the same time compelled to express their regret that some of their earliest associates have left the association, because the benefits which they had been led to expect as likely to result from its labours have not been realized so speedily as they have desired. These gentlemen should have borne in mind, that the purposes for which this society was called into being are to be accomplished only by unwearied patience, by continued perseverance, by untiring industry. The movements of the association may to some have appeared slow, and almost imperceptible; but the council are warranted in believing that they have not been wholly unappreciated by their brethren throughout the country. The success of the association, and the extent of its usefulness, must obviously be commensurate with the degree of support which shall be given it by the medical practitioners of the northern counties of England; and where the individual contribution is almost nominal, it cannot but be a matter both of surprise and concern, that any member of the profession (admissible by its rules) should withhold his aid from an institution whose designs are so excellent, and whose exertions are unceasingly directed to the fulfilment of noble and praiseworthy objects.”

Mr. Baird moved the adoption and printing of

the report, and a vote of thanks to the council; and Dr. Greenhow seconded the motion, and it was passed unanimously.

Dr. Glover was called upon by the President to read the report of the Committee on Medical Appointments to Hospitals and other Public Charities. It was as follows:—“The committee conceive that they do not deviate far from the path which it was intended they should follow in making this inquiry, by confining themselves to the consideration of the mode by which the medical officers of English Hospitals and Dispensaries are appointed. This is well known to be by the votes of governors, whose subscriptions give them an interest in an institution, or by trustees, whose power is derived under the will of former benefactors. Such being the mode everywhere in this country, your committee have but to ask what evils exist under this system? and should evils be found, to consider how they can be remedied. Before, however, entering particularly on these questions, a few words may be premised on the propriety of the step taken by the association in suggesting such an investigation. It may be deemed that this association thus interferes with the rights of the governors of medical charities, or that any recommendation which it may make will be by them deemed a species of dictation. Some may also be of opinion that the individuals who, to the honour of our country, so generously support these institutions, are the best judges of what can contribute to their welfare, and the most fitting guardians of the trust involved in making the appointments of the medical officers. Assuming that the governors have no object in view but the welfare of the institutions which they so generously support, your Committee hope that they may with safety expect a due effect from any suggestions which may be made to the governors of Hospitals and Dispensaries, in the North of England at least, from such a body as this Association. Supposing that the governors look to the welfare of the patients, and we to the interests of medical science and the maintenance of the dignity of the profession, it may be easily shown that these objects, so far from being irreconcilable, are absolutely and inseparably connected. Moreover, if the profession, as a body, chose to refuse to give its labour gratuitously to such institutions, and thus to imitate the conduct of other professions, the undoubted right in such a case would be with the profession; and who shall venture to call in question our conduct, if, in return for immense public services, gratuitously rendered, we stipulate such terms as shall both benefit the public, maintain our own dignity, and further the progress of the science to whose advancement we are bound by every sentiment of humanity, and by the feelings which our education has fostered?—Your Committee conceive that the great evils of the present system, are the mode of canvassing which prevails at the elections—the appointment of medical officers without due consideration being given to the respective professional claims of the candidates, and the holding of offices in many institutions by one individual. There can be but one opinion with regard to canvassing. This practice is infinitely more likely to promote the success of a candidate of inferior qualifications, than of one of superior attainments; because the former is more likely to have recourse to those little acts of popularity which the possessor of real merit will most probably disregard. Canvassing is too often a degrading and unprofessional appeal to the habits and caprices of the nonprofessional public. The great difficulty of making the medical appointments of which we speak, arises from the ignorance of the public with regard to the relative value of the claims of professional men, and the tendency of those thus placed in ignorance of what ought to dictate their vote, to be biassed by feelings of self-interest—for to such must all influence of patronage and connection be attributed. Could these appointments be properly made, they might serve, in a great degree, to improve the position in which the medical profession is placed. No amount of professional qualification will always secure the success of a medical man in practice. And the same false suffrage which awards the emoluments of practice, bestows these appointments. Until the sciences which are the basis of Medicine,

such as Physiology and Chemistry, and which ought to form part of liberal education, are more generally cultivated, this evil can hardly be corrected, unless the *concours* be supposed to afford a remedy with regard to Hospital and Dispensary appointments.—The members of your Committee entertain different opinions on the subject of *concours*. Some think the *concours* to be inapplicable in this country, as being foreign to the habits of Englishmen; that impartial and suitable judges can be rarely found; and, moreover, that the *concours* itself does not present a desirable mode of trial of the respective merits of candidates. Others, including especially those members of the Committee who have seen the operation of the *concours* abroad, while they doubt the possibility of the *concours* being introduced into England, from the force of prejudice and weak dread of innovation so prevalent, yet believe that if the *concours* could be carried into effect, it would present as perfect a panacea for the evils which now exist as could be desired. Being thus divided in opinion, your Committee refrain for the present from expressing their sentiments further on this important point, but proceed to say a few words on the rotation system.—To such an arrangement as would place every member of the profession, residing in a place where an Hospital might exist, successively in an office, the Committee are decidedly opposed; because, unfortunately, members of the profession are to be found who may with advantage be subjected even to the scrutiny that at present exist, before being allowed to undertake so responsible an office as that of surgeon or physician to a public institution. Besides, your Committee think that where pure surgeons or pure physicians are to be found, they should have the advantage of the means of cultivating science which public institutions can place at their disposal, and of which they are likely to be more capable of taking advantage than general practitioners.—Besides the abolition of canvassing, the only improvements on the present system which the members of the Committee can agree in proposing, are two:—1. That the appointment should not be made for life, but for a term of seven years (as in Edinburgh), or other limited period. The appointment should then be renewable, but the office open to competition. Along with this, all the medical offices of Infirmary and Dispensaries should be compelled to give clinical instructions where pupils are to be found.—2. That no one be allowed to hold more than one Infirmary and one Dispensary appointment together.—A notion prevails among the public, that the cultivation of medical science in public institutions is in some degree opposed to the welfare of the patients. This prejudice is entertained by people whose position should give them liberality of sentiment. It is clear that the more attention a medical man can be induced to bestow upon a case, and the more his treatment is subject to criticism, so much better will it be, on the whole, for the patient. Besides, the cultivation of medical science in an hospital, and the publication of new facts, may cause a thousand benefits, and lead to the alleviation of human suffering throughout the world, and for ages to come.—Your Committee are of opinion that in the present stage of the inquiry they cannot do more than thus report progress, and ask leave to make any communication to the Association which a more matured state of the investigation may render necessary.”

Dr. Embleton moved the adoption of the Report, and Mr. F. Bennett seconded the motion.

Mr. Torbock and Mr. Elliot objected to that part of the Report which gave preference to the pure physician and pure surgeon over the general practitioner. In Carlisle, it was stated, there was neither a pure physician nor a pure surgeon, and in few places out of London was a pure surgeon to be found.—In reply it was observed that the rule suggested in the Report could of course apply only to places where pure physicians or pure surgeons were to be met with.—Dr. George Fife partially condemned the passage objected to, and Mr. Carter recommended its omission.—Mr. Greenhow, of Newcastle, and Drs. Brown and Charlton, supported the Report as it stood.—Dr. Glover conceived it to be of consequence that the passage should be retained, because it expressed the feel-

ing of the Association in favour of those salutary divisions of labour in the profession which time had established, and conveyed their opinion that the means of extending science could most properly be intrusted to men who confined themselves to one department of the profession. After much discussion, in which Dr. Knott took part, the Report was adopted without alteration, on a show of hands.

Dr. Brown moved:—“That the council be authorised to adopt such measures as shall from time to time be deemed best calculated to assist in obtaining an Act of the Legislature for the better regulation of the medical profession.” It was evident (said Dr. Brown), that there would be no legislation this session on the subject of medical affairs. Parliament was too fully occupied with other and more pressing questions. But a bill had been framed, or was framing, by the Secretary of State for the Home Department, and it was important that the Council should be empowered to act, whenever a fitting occasion might arise. The nature of Sir James Graham’s measure, the Report had informed the Association, was not clearly known. It was much to be feared, however, that it did not recognise the representative principle—the principle to which the North of England Medical Association was firmly pledged; but proposed to adopt as a groundwork the present self-elected corporations, who had never shown themselves entitled to the confidence of the profession at large. A Bill so framed could not possibly receive the approval of this Association. Mr. Jobson seconded the motion.—Carried unanimously.

Dr. Knott briefly moved the next resolution:—“That such modification be made of Rule XXVIII, as shall prevent the recognition of Degrees of Medicine which shall have been *purchased*, and not conferred after appropriate courses of *education* and *examination*.”

Dr. De Mey seconded the resolution.—Carried unanimously.

Dr. George Fife moved an addition to Rule XV. The rule, as it now stood, was as follows:—“The Council shall be empowered to employ legal assistance, or to adopt such other measures as it may consider expedient, for the protection of any member of the Association.” He proposed to add:—“And the Council shall alone be competent to entertain questions of professional etiquette;—parties dissatisfied with its decisions to have the alternative of appeal to a general meeting.”

Dr. James would second the resolution, if, after “etiquette,” the words “in the first instance” were added; and if “a right” were substituted for “the alternative.” Dr. Fife consented, and the resolution was passed as amended.

Mr. Morrison then proposed a resolution condemnatory of the Council giving opinions on matters of professional etiquette, which after some discussion was negatived.

Dr. James suggested that a code of laws, to regulate the etiquette of the profession, should be framed by the Council—[a task which, in the opinion of the President, and of other members, would be very difficult, if not impossible].

Dr. De Mey suggested that a petition should be prepared against Lord Granville Somerset’s Lunacy Bill. When he (Dr. De Mey) first heard of this Bill, he thought that it must be a hoax. He could not suppose it possible that any senator would seriously propose to employ barristers for the inspection of lunatic asylums in preference to medical men! Such quackery from a man of education was incredible! As well might a gentleman take his watch to a shoemaker to be mended, as a barrister be employed to superintend a lunatic asylum; and yet it was too true that Lord Somerset had made the proposal. Against such an insult the medical profession was bound to record its solemn protest. (Applause.)

Mr. Morrison suggested the presentation of a petition for the amendment of that very imperfect and pusillanimous measure, the Anatomy Act. He had paid considerable attention to the subject, and was convinced that nothing substantial would be done, unless the profession bestirred itself.

Dr. James moved a vote of thanks to the President, and the meeting closed.

THE DINNER.

A capital dinner followed the proceedings, which

being far more interesting to those present than to ourselves or the great bulk of our readers, may be passed over by us in admiring silence.

On the following day, the voting-papers, delivered at the business meeting in the lecture-room, were examined by the scrutineers, and the election was found to have fallen on the following gentlemen:—

President.—Dr. Headlam.

Vice-Presidents.—Dr. Brown, Mr. Baird, Mr. T. M. Greenhow, Dr. Cahill (Berwick), Sir John Fife, Dr. Winterbottom (South Shields), Mr. Green (Durham), and Dr. Elliot (Carlisle).

Treasurer and Secretary.—Mr. T. C. Carter.

Council.—Dr. Charlton, Mr. Potter, Dr. De Mey, Dr. Knott, Dr. R. Elliot, Dr. Glover, Dr. Embleton, Dr. Cargill, Mr. Bennett, Dr. Fife, Mr. Tulloch, Mr. Dawson, Dr. Oliver, Mr. Dixon (Sunderland), Dr. White, Mr. Talmadge, Mr. Brimell, Mr. Mordey (Sunderland), Mr. Dodd (Sunderland), Mr. Gregory (Sunderland), Dr. R. James (Carlisle), Mr. Watson, Mr. W. K. Eddowes (South Shields), and Mr. Sang.

[We are indebted for the above abridged account of these interesting doings of our Northern friends to the voluminous report furnished us in the Gateshead Observer, a paper which, by its liberality on all matters that concern the medical world, deserves the cordial support of the profession.—Ed.]

PHRENOLOGICAL SOCIETY, EXETER HALL.

DECEMBER 6, 1841.

A CAST of the head of the murderer Blakesley was presented by Mr. Deville. Dr. Elliotson stated that he also had taken steps to procure a cast of Blakesley, which he then exhibited, and which, he said, it would be seen, was a strong corroboration of the truth of phrenology. It showed the development of a dreadful character, in which the lower feelings greatly preponderated over the higher; and unless placed under very favourable circumstances, an individual with such an organization would be sure to become a troublesome member of society.

The general outline of the head bore a strong resemblance to that of the majority of the murderers in the Society’s collection, and especially to that of Courvoisier; and it was remarkable also that there was a strong family likeness, if he might so term it, in the features of all of them.

The intellectual development was very moderate, the forehead being narrow and retreating; the lower part, however, the situation of the perceptive faculties, was more fully developed, though not in proportion to the sides and back. The posterior, superior, and inferior-posterior regions were very largely developed. Firmness, self-esteem, and love of notoriety were all large. The coronal surface sloped off at the sides, giving a keel shape to the top of the head, such as is invariably seen to accompany great deficiency in moral rectitude. The organs of love of offspring and of friendship were very large, and that of sexual love large. Of course, with such a head, there would be great violence of character, and this being combined with great attachment, we could easily conceive that the individual might attempt to destroy the life of the object of his affections if forcibly separated from her.

December 20.—T. E. Kennion, Esq., was elected an ordinary member.

Mr. Prideaux presented a cast of the skull of an aged female, dug out of chalk upon Portsdown hill. Some skeletons, and arms of ancient Britons were found in the vicinity, and it was considered by Mr. Prideaux as a pure specimen of the ancient Celtic race.

Mr. Logan presented a cast of the murderer Greenacre, and exhibited a specimen of alumn coating as applied to casts, making a very good representation of marble.

Mr. Atkinson presented a cast of a forehead presenting a marked deficiency of the organ of colour, and stated that it was the mask of a gentleman who was unable to distinguish the red ray not being able, for instance, to discern any difference of colour between the red root of a radish and the green leaves. He also exhibited a cast of a Ma-

C. who had embraced the Puseyite doctrines. Veneration and marvellousness were both very large, and the whole moral region was beautifully developed, forming a marked contrast to the head of Blakesley.

The President gave the measurements of the head of Blakesley, showing how remarkably they corresponded with those of Courvoisier.

FEELINGS.		Blakesley. Courvoisier.	
Disposition to do violence—Destructiveness	5	5	5
Cunning	5	5	5
Love of property	5	5	5
Self-esteem	5	5	5
Love of notoriety	5	5	5
Circumspection	5	5	5
Firmness	5	5	5
Love of offspring	5	5	3
Friendship	5	5	3
Sexual love	4	5	5
Alimentiveness	4	5	5
Veneration	4	4	4
Courage—Combativeness	3	5	5
Constrictiveness	3	4	4
Conscientiousness	3	3	3
Hope	3	3	3
Poetic feeling	3	3	3
Marvellousness	3	3	3
Benevolence	3	2	2
Imitation	3	2	2

INTELLECTUAL FACULTIES.			
<i>Inferior.</i>			
Sense of Things	5	5	5
— Locality	5	4	4
— Persons or Form	4	4	4
— Language	4	3	3
— Order	3	4	4
— Colour	3	3	3
— Tune	3	3	3
<i>Superior.</i>			
Comparison	4	2	2
Causality	2	2	2
Wit	2	2	2

The measurements were as follows:—

Circumference of the whole head, passing immediately above the eyes	23 3-8ths	23 1-8th
Line from ear to ear forwards	11 4-8ths	11 5-8ths
— — backwards	11 3-8ths	11 4-8ths
— — over the head	12 2-8ths	13
From the meatus auditorius		
— to Firmness	6 3-8ths	6 4-8ths
— to Veneration	6 3-8ths	6 3-8ths
— to Benevolence	6	6 1-8th
— to Sense of Things	5 4-8ths	5 3-8ths
— to Comparison	5 6-8ths	5 6-8ths
— to Pride	5 7-8ths	6
— to Parental Love	5	5
— to Inhabitiveness	5 4-8ths	5 4-8ths
Breadth at the outer extremity of the orbits	5	4 6-8ths
Immediately above the ears, the		
— desire to do violence	6 3-8ths	6 4-8ths
— at centre of Causality	2 2-8ths	2 2-8ths
— — Property	6 2-8ths	6 2-8ths
— — Cunning	6 4-8ths	6 4-8ths
— — Combativeness	5 3-8ths	5 6-8ths
— — Sexual Love	3 3-8ths	3
— — Circumspection	6	6 4-8ths
— — Poetic Feeling	5 2-8ths	5 2-8ths

EXTRACTS FROM FOREIGN JOURNALS.

[For the Medical Times.]

Influence of a high atmospheric pressure on the animal economy.—M. Poiseuille refers to his researches during several years past, with the view of ascertaining the influences of a high atmospheric pressure on the animal economy.

Salamanders, subjected by him to a pressure seven times as great as that of the ordinary atmosphere, have presented nothing irregular in their circulation. This experiment was repeated with the same result on some mammiferous animals, as rats and mice. Mice, which had borne for some hours a pressure eight

times that of the atmosphere, have begun to eat and to move about in their usual manner as soon as released from the experiment.

Amputation above the Ankle-joint.—M. le Baron Larrey stated, in reference to this subject, that the following reasons appear to him decisive against this mode of operation:—

1st. If the disease for which we operate is confined to the malleoli, we cannot give the preference to amputation above the ankle-joint, for, as M. Gimelli has demonstrated, the bad results which follow are both more numerous and more grave.

2ndly. MM. Arnal and Martin were mistaken in that part of their statistics relating to this kind of amputation performed in the African army; no operation of this kind was there practised, as a letter from M. Gagon, the military surgeon, bears witness.

3rdly. The mechanism upon which the artificial leg, proposed by M. Martin, is founded, had been understood previously to him.

4thly and lastly; the superiority of amputation below the knee is established by the experience of half a century.

M. Blandin then mentioned the case of a young person, on whom he had performed amputation above the ankle-joint, in 1835, at the Hospital Beaujon. Being provided with an artificial leg, manufactured by M. Martin, it perfectly conceals the absence of the foot, both as respecting the deformity and with regard to locomotion. Doubts, said M. Blandin, have been cast on the reality of this fact; it has been asserted that the patient, far from having to rejoice in the result of the operation, experiences acute sufferings on every attempt to walk, but you may yourselves see that these assertions are erroneous.

M. Gimelli stated that he had not maintained the assertions to which M. Blandin had alluded; he had instanced in the discussion, some patients who were not able to accustom themselves to the artificial leg; but he had not called into question the case of the young person presented by M. Blandin.

M. Blandin: whoever may be the author of these reports, as they have been spread about, it is necessary that they should be contradicted.

The young girl being interrogated by M. Blandin and M. Gimelli, answered that she had never expressed to any one the least dissatisfaction; she assured them that she was perfectly satisfied with the result of the operation, and said that she had ever been able to walk three leagues with her artificial limb. She walked, in fact, without support, and ascended and descended the steps of the amphitheatre with great facility.

Zenotomy.—M. H. Larrey presented a patient, in whom, after amputation of the foot according to the plan of Chopart, the plantar fascia, as well as the heel, were drawn backwards. In consequence of this displacement, cicatrization of the wound was prevented, and the inconvenience which resulted was so great that the unfortunate patient came to the hospital to demand that we should amputate the leg below the knee. Before complying with his desire, M. Larrey wished to try the effect of division of the tendo Achilles. Immediately after this operation, the fascia became relaxed, and returned to its place; the cure was then quickly obtained. It is now nearly a year since it was completed.—*Gaz. Med. de Paris.*

New mode of administering cubebs in urethritis and vaginitis.—On giving cubebs internally, we remark that very shortly after its reception in the stomach, the urine becomes impregnated with a very marked odour of the volatile oil, evidently proving that the essential oil contained in the cubebs passes rapidly

through the digestive tube into the urine. The knowledge of this fact long since led M. Piorry to think that this medicine acted in gonorrhœa in an entirely local manner, by exercising, through the medium of the urine, a topical action upon the canal of the urethra. His view on this subject is confirmed by the following case related by Mr. Ricord:—A man affected with *hypospadias* had contracted a urethritis which extended through the entire length of the canal; he was treated with cubebs, and the whole portion of the passage along which the urine passed became healed, while the discharge still took place from the other part of the canal. Admitting this theory, we are naturally led to think that the best mode of administering the cubebs will be that which will cause the urine to be constantly charged with this medicine, while traversing the canal of the urethra: this is precisely the plan lately adopted by M. Piorry, who orders the patient to take every hour a bolus containing 20 grains of cubebs, thus administering about an ounce in the course of the day. Two private patients under his care have lately been perfectly cured by this method in the space of four or five days. Very recently also, at the *Hôpital de la Pitié*, several patients, who had for months laboured under this disease, have by this mode of taking the medicine got rid of their discharge in three or four days; and one man, who had been affected for two months, was completely cured in the space of forty-eight hours. The plan which he employs in women is almost similar. It consists in throwing into the vagina every hour an injection, formed of half an ounce of cubebs infused in a pint of water. M. Piorry is at present trying the effect of the essential oil of cubebs in these diseases.

New means of increasing the efficacy of seawater, particularly when employed in strumous affections.—According to the observation of Dr. Nardo, sea-water, when employed in scrofulous diseases, whether given internally, or used under the form of baths, would seem to exercise an action so much the more energetic and certain, as it shall contain a larger quantity of the soluble principle imparted to it by the marine plant known by the generic name of *algæ*. Entertaining this idea, M. Nardo saturated some sea-water with this principle, and the success which he has met with from its employment during the last four years, has convinced him of the great superiority of this preparation over the natural sea-water, both in respect to the certainty as well as the rapidity of the cure induced. In the first instance, M. Nardo confined himself to mixing sea-water with a very strong decoction of these plants; but he soon discovered that the properties of the water thus prepared were much inferior to those generated by the following process:—A suitable quantity of the fresh plants are to be macerated in some sea-water for several days, at the same time aiding the dissolvent power of the liquid by exposing it to the action of the sun's rays, and this maceration is to be prolonged till the liquid has acquired a very strong and characteristic marine odour and taste. This preparation, he states, possesses specific powers in correcting that morbid condition of the economy which is met with in scrofulous subjects.

MEETINGS FOR THE ENSUING WEEK.

MON.	Geographical Society, half-past 8 p.m.
—	Medical Society of London, 8 p.m.
TUES.	Royal College of Surgeons, lecture, 4 p.m.
—	Royal Medical and Chirurgical Society, half-past 8 p.m.
—	Zoological Society, half-past 8 p.m.
WED.	Royal Medical Botanical Society, 8 p.m.
—	Microscopical Society, 8 p.m.
THU.	Royal College of Surgeons, lecture, 8 p.m.
—	Royal Society, 8 p.m.
FRID.	Apothecaries' Hall, lecture, 3 p.m.
—	Royal Institution, half-past 8 p.m.
SAT.	Royal College of Surgeons, lecture, 8 p.m.
—	Westminster Medical Society, 8 p.m.

We beg to direct attention to the meeting of the North of England Medical Association. We have received fresh arrivals of country quacks. We shall announce next week when and how we shall give the rogues the publicity they hunt for elsewhere, but dread at our hands. We understand that we have terrified some to abandon their practice, others to look after a diploma. Press of matter has excluded our notices to Correspondents, and several interesting papers, and led us to postpone the paper by Mr. Yearsley.

ROYAL COLLEGE OF SURGEONS IN LONDON.—A LECTURE on the FOSSIL REMAINS of EXTINCT ANIMALS, especially of the two newly-discovered QUADRUPEDS—the Mylodon and Glyptodon—will be delivered in the Library of the College, by Professor Owen, F.R.S., on Wednesday, the 4th of May, at 9 o'clock in the Evening. Tickets of Admission to which will be delivered to Members of the College upon personal or written application to the Secretary at the College.

By Order,

EDMUND BELFOUR, Secretary.

ROYAL COLLEGE OF SURGEONS IN LONDON.—The Catalogue of the Specimens of Urinary Calculi in the Museum of the College, about 600 in number, illustrated by Twelve Engravings; plain or coloured as may be desired; is now in the press, and will be delivered to Members of the College at the cost of the Paper and Letter-Press only, no charge being made for the Plates unless Coloured.

Members desirous of possessing a Copy, are requested to send their names to the Secretary, at the College, on or before the 10th of May next, in order that the number of copies necessary to be printed off may be in some measure ascertained.

The First Volume of the Transactions of the College will shortly be published and will be sold to such Members, at cost price, as shall transmit their names to the Secretary on or before the 10th of May next.

By Order,

EDMUND BELFOUR, Secretary.

THE MEDICAL TIMES.

SATURDAY, APRIL 30, 1842.

Est modus in rebus; sunt certi denique Fines,
Quos ultra citraque nequit consistere Rectum.

SOME twenty years ago, or more, being then an unconsidered brat, we wrote on this well-known, well-thumbed couplet, a hard-laboured, and in our eyes splendid essay, being three pages of foolscap carefully ornamented with solemn truisms, whose wholesale sweepingness was amply atoned for by the space-filling and most convenient exceptions and reservations which were harnessed to them. The editor of the Medical Gazette—a slower coach apparently—has just written his essay on the self-same familiar theme in the last number of his journal. We have read it with the interesting emotions which the associations it raises naturally excite—and in the hearty brother-feeling of our renewed recollections, give him our warmest felicitations that he is under the sway of the merciful Messrs. Longman, Brown, and Co., rather than under that of our old classic-loving pedagogue. Were it by any mischance otherwise, he might be twice an editor, and with such a theme not escape a horseing!

What pleasing reminiscences are called up by the two first sentences of Dr. M'Leod. If they were not, *totidem verbis*, the property of at least a dozen generations of public school-boys, we should insist that the grey-haired boy had committed a plagiarism on us. Though 'tis more than twenty years since, we remember every word of them:—

"In these lines," he commences, "the poet has embodied a sentiment which few are disinclined to assent to in the abstract, but many are apt to disregard in practice. If, at the end of this dry precept, he could have pointed out in what the *modus* consisted, where those *certi fines* were to be discovered, he might have gained the *additional* honour (additional to what?) of having saved posterity from the exhibition of no small amount of folly, and from the consequences of many extravagant opinions and actions which they have to regret!"

Then he goes on—but this is no plagiarism on our boyhood, it is Dr. M'Leod's own:—

"The bequest of a standard for our conduct to which we might refer upon *all occasions*, AND (omnes res et quædam aliæ!) under *all changes*, would be too rich a legacy to expect for any one who was not himself free from human imperfections!"

Indeed! and therefore the modest editor proceeds forthwith to bequeath the standard himself. "Let us, however," he proceeds, "recommend the *condensed* and *important* maxim (how wonderously like our own school-boy choice of epithets!) where it seems to apply"—id est—"let us point out in what the *modus* consists, where those *certi fines* are to be discovered, and give that rich legacy to the world which is not to be expected from any one who is not himself free from human imperfections!" But the "*certi fines*," in the manly theme-writer's hands, are about the most uncertain *fines* we have ever had to deal with. "He adduces the maxim," he tells us, "in opposition to the restless spirit of the time which is so averse to anything like a moderate and dispassionate view of a subject, and also in refutation of those hasty and extreme opinions which are incessantly brought under our notice." But what immoderate and passionate views of a subject are, and what hasty and extreme opinions are, and what their contraries, seem as little known to the commentator on Horace, as the commentator pretends they were to Horace himself. Indeed, from the essayist evidently supposing some contradictory difference between "immoderate and passionate views," (a *passionate view*, an *immoderate view*!) and "hasty and extreme opinions," we question if his vision be the best adapted to measure that "*modus*," or mark the precise limits of those *certi fines* about which he so eruditely lisp in prose.

We come now to a choice specimen of generous love of fairness. Master M'Leod evidently writes as if the world were to be placed something more than ankle deep in debt to him for the admission. "Of good and sound reform we have ever been, and shall continue to remain, (our own style of ending that phrase,) the *consistent* supporters, being fully aware of its necessity, AND of the advantages to be derived from it!" Reasons with our old-young friend seem as plenty as blackberries. Another would have been satisfied to consistently support the thing called "good and sound reform," because it was *reform*, or because it was *good*, or because it was *sound*, or at all

events, because it was all three together; but Master Mac has another reason, "advantages may be derived from it!"

After all, however, this is an admission; but, alas! to counterbalance this, and check our infinite gratitude, we have to notice an equally generous admission on the other side. How it reminds us again of our own juvenile plan of lengthening essays by a few "but," and "however," and "on the other hand" clauses!

"At the same time we by no means assent to the bold proposition that all change is to be esteemed as reform, but feel it incumbent on us to reprobate the exorbitant demands of those who not content with safe and moderate measures are ever bringing forward preposterous and dangerous schemes, and who, not satisfied at the introduction of such regulations as may establish more securely, and render more efficacious, our present systems, are anxious to demolish those systems altogether, and to build on their ruins various chimerical projects of their own inventions."

Master Mac surely writes with a dictionary by his side: we should defy him otherwise to multiply words so enormously on such a small soil of ideas. It beats Mr. Wakley's facility of manufacturing inquests on a small amount of cause. We have seen great feats performed by Dr. Peter Slop, of the Minor, in the way of word-mongering, but Master Mac has, we think, decidedly the advantage. The poet who wrote his thousand lines, *stans pede in uno*, would stand a poor chance with Master Mac, if the latter were only allowed his own weapon—dry prose. The writer's solemn declaration that he cannot by any means assent to the bold belief, that all change is to be *esteemed* as reform, is a literary curiosity. It shows a depth of thought, an unparalleled honesty of purpose that call for his immediate inclusion in the list of the Socrates, the Platos, the Hampdens. We shall not rest while thinking of it till a new wing be added to the College of Physicians, to form a M'Leod Museum for the due preservation and display of all the psychological curiosities reposed in that wonderfully formed mind of his. Hunter's collection of anomalies has won the physiologist secure immortality; but *they* were extraneous: our illustrious editor's are all from within, and we may venture to predict on the strength of them, that when Hunter is forgotten, M'Leod shall be remembered; how much *before*, is a matter we leave for other's prophecy.

We recollect an old rhetorical maxim, "the more stupid your audience, the more your repetitions." Master Mac doubtless never heard of it, for we have never seen it in the mother tongue before; but with that intuitive tact which so eminently belongs to him, he has evidently felt it necessary to apply it practically for the benefit of his readers. Perhaps a specimen or two may be tolerated to us.

"When once the tide of reform has fairly set in, it requires no moderate force to turn it aside,"—"it usually works its

way in spite of all opposition"—"its best and most cautious *promulgators* are liable to transgress the limits which prudence dictates,"—"the eradication by it of the evil complained of, will not be effected without the destruction of much good, *which might remain*,"—"the cry (for medical reform) had gone abroad, (in 1833,) and could not be appeased except by changes of greater moment,"—"it (the cry) has since been heard gradually *progressing* till it has *surpassed* the bounds of reason, and now threatens to *abrogate* altogether our present system, to *extirpate* the colleges!" &c.

We pass by, in mere weariness of spirit, a hundred other repetitions, false metaphors, inane attempts at reasoning, sufficient to illustrate in themselves every variety of blunder that grammar or rhetoric takes cognizance of, and passing from words to things, give one choice specimen of the spirit in which the unflagellated Master Mac deals with that "good and sound reform" which he so *sincerely* advocates. After declaring that there are confessedly so many evils which have long demanded revision and correction, that he would rejoice in the *prospect* (we suspect in nothing but the *prospect*!) of seeing our practitioners relieved from the evils under which they labour, he strings together this pretty tolerably grand sentence for us even:—

"We are far from subscribing to the opinions of those who place *implicit* reliance in the *so-called* wisdom of antiquity; at the same time, we must *insist* that existing institutions and customs *do appear* entitled to respect and deference, *from the very circumstance of, and in proportion to*, their antiquity. The period during which they have stood the test of time, and the *attacks of violent men* in periods both of *revolution and of peace*, is a decided testimony in their favour—NAY MORE, it is a powerful argument for their preservation. If they have (if they *have*) been so long serviceable to the ages and to the men they have survived, they ought to have credit given them for the capability of being continued with advantage; and surely this is no small argument to tender in opposition to the caprice and fancy of an innovator."

And this is an editor's reasoning, the ratiocination of an M.D., and a Fellow of a Royal College! One is almost ashamed to utter an opinion on such childish nonsense. The institutions are not entitled, but "*do appear* to be entitled (and to what?) to deference and respect!" Now medical reformers care less about appearances than results; and if the writer could prove that the institutions deserved respect, they would render it without troubling themselves whether there was a semblance of the desert or not. But what a contemptible abandonment of our corporate bodies is this by its own advocate. The only thing that he can say for them is, that they possess antiquity! The poor old ladies will hardly thank the editor for the point he has found out in their favour. Things, it would appear, are judged of, and thought of value by this editor of the Medical Gazette, from the "very circum-

stance of, and in proportion to, their antiquity!" And this is the standard, the legacy which, *unbequeathed* to the world by the imperfect Horace, is given by the faultless M'Leod! This is the *modus*, these the *certi fines* as laid down by Master Mac, which are "to save posterity from the exhibition of no small amount of folly, and from the consequences of *many* extravagant opinions and actions which they have to regret!"

On thinking over this jejune, contradictory and puerile theme, this bundle of rigmale truisms and common-place falsehoods repeated interminably till the patience is as much exhausted as the judgment is disgusted, we are compelled to turn round and ask, in sober professional sorrow, what is the character of the men who can put up with such childish and insufferably foolish twaddle? We can readily understand that the few gentility-hunting youths, inane fops, poor, proud, and brainless, who, by their ignorance, injure the character, as by their silly and upstart pretensions they destroy the harmony of the profession, we can understand why inanities like these should cling round a journal which represents as in a mirror their contemptible peculiarities, and gives them tacit lessons of quiet self-contentment; but that a Doctor Golding Bird, (the pleasing contrast to his juvenile brother,*) or a Mr. Herbert Mayo, (the solidity of whose *private*, is only equalled by that of his *professional*, respectability,) should for once have lent their distinguished and honest hands to support so fraudulent and puny, so viper-like a publication, is a greater paradox—we confess it—than the fact that a journal, professedly intended for gentlemen and scholars, can exist with such a management, or get a circulation with such principles. The turgid pedantry of a Dr. Hull, or the amiable drivellings of a Dr. Kerrison, may find in the Medical Gazette a congenial location. The good sense of a Golding Bird, or a Mayo, look in it like a statue by Michael Angelo in a bazaar of Chinese curiosities.

Lord Granville Somerset received, on Wednesday se'nnight, a check in the prosecution of his Lunatic Asylum's Bill—and strange to say, among those who gave the check so useful to the medical profession, Mr. Wakley was a prominent figure! He played, of course, some of his customary antics; but, thanks to a favourable house, without their customary results. For once in his life, he was not only laughed at, but thought reasonable; a compliment which will remind him, we trust, of the personal good policy of a man in his position paying some little

* This gentleman, we understand, has been directing the boyish impertinence of his extreme respectability to very vulgar and very false aspersions on our journal. He is one of the many young gentlemen who, inverting the maxim of Juvenal, *Pauperes laudatur*, &c., praise high and buy low priced journals. If they ever read the latter it is at the expense of some public institution! We hope to hear of no instances of similar impertinence.

regard to the interests of the profession to which he owes his all.

Mr. Wakley first moved to substitute medical for legal commissioners. Why Mr. Wakley abandoned an amendment so full of plain justice and common sense, we know not. In the House he gave as his motive the opposition of Lord G. Somerset, and consistently substituted another amendment (leaving the appointment at the discretion of the Lord Chancellor), which, though opposed equally by the Noble Lord, he pressed to a division and carried! As Mr. Phillip Howard, the respectable member for Carlisle declared, the last motion gave no guarantee that the Lord Chancellor, feeling a natural esprit du corps, would not consider the vote of the House a virtual confirmation of the general propriety of legal commissioners on lunatic matters. And, there was not a member present who opposed the minister on the discretionary power, who would not have equally opposed the minister on the definite substitution of the medical for the legal commissioners: and in proof of this opinion, founded on a consideration of the circumstances, we have the testimony of a most respectable member of the House, acquainted with the sentiments of the gentlemen who voted with him. In a House of 41 members, the discretionary clause was carried by a majority of three. Lord G. Somerset, it is possible, may look upon the vote as a clear expression of opinion—as it certainly would have been save for Mr. Wakley's blunder—against the legal commissionership, and it is not known yet what effect this just and honourable view of the House's sentiment, should Lord G. happily entertain it, may have upon the future fate of the whole bill.

One consideration that forcibly occurs to us on reading this debate on the palpably absurd proposal of Lord Somerset, is the great want of a few medical men in the House. Every profession has its representatives and protectors in Parliament but our own. How many questions that so closely concern us lie on from year to year unsettled, simply because we have really no member of our body willing or qualified to take them boldly under his charge. If the church had its grievances, how soon would they be redressed. If the law had its hardships from unlicensed interlopers, or bad government, how soon would they be remedied. Yet here we are with nineteen irresponsible diploma-makers, raising or lowering the scale of qualifications in precise accordance with their whims or pecuniary wants; here we are with courses of education as varied as the tongues of Babel, and about as intelligible to the understanding of common sense; here we are with any man for a rival who thinks proper to buy a diploma from a foreign college, or is willing to practise without; here we are with these and a thousand other anomalous grievances like

them—grievances which no learned profession suffers from in any country but ours, and none even in our country but our own—and year passes after year, and while the evil is fearfully aggravating itself in positive practice, the efficient remedy is as far off as ever.

Who can doubt, that on this particular matter, the Lunacy Bill, if there had been one respectable member of our profession present, who knew how to represent with becoming dignity how necessary was an intimate acquaintance with the animal economy, and the various subtle laws that regulate it to form a correct estimate of the state of that mind with which it is so essentially connected—to diagnose the presence—to understand the nature of lunacy—to distinguish the proper from the improper modes of treatment—in short, to perform any one of the heavy responsibilities that devolve on a Lunacy Commissioner who can doubt, we say, that if there were any decent member of our profession present who would have represented these and similar considerations in their full force to the House, that Parliament would not have left the new act in its present equivocal and very dangerous state, but would have definitely decided that no one was qualified for such duties but a medical man, and one, too, well versed in the science of his profession? We confess we are not sanguine of much parliamentary good to us, till we see one or two of our body in the House. Mr. Wakley, as far as the profession is concerned, is, as a general rule, either a cipher, or worse. There is so utter a want of personal weight, so grotesque an absence of anything approaching senatorial dignity, that when—in one of these instants of leisure left him by his inficite inquests—he makes a clumsy effort to help us, we are almost sure to receive more damage than service. From his peculiar character, his very advocacy overshadows a cause with suspicion and discredit, and good measures which have escaped all other perils, find their shipwreck in his ominous approval. The man has scarcely deserved it; much less we; it is his fate as our misfortune!

MESMERISM.

ON Wednesday, the 6th instant, we attended a *seance mesmerique* given by Dr. Elliotson, at his house in Conduit-street. We noticed among those present several noblemen, public characters, and gentlemen, former pupils of the doctor's at University College, now in practice, and ladies.

At a quarter before four, a girl, aged 16, of delicate proportions and rather prepossessing appearance was introduced, and was described by the doctor as a patient who was placed under his care about eight months since. She was then subject to most violent epileptic fits, which had recurred at very short intervals for eight years. Conceiving her to be a fit subject for the mesmeric influence, he essayed, and succeeded, the very first time, in throwing her into the usual artificial sleep, though she utterly disbelieved in the power of mesmerism. Since that time she had had but two returns of the fits; one of these occurred at a period of great excitement, when the process had been suspended for seven

weeks, on account of his absence on the continent; the other, when, from accidental circumstances, it was performed but once in a period of three weeks. The girl being placed in a chair à la Voltaire, her sister sitting near her, Dr. Elliotson directed the points of his fingers towards her eyes without moving them. In about fifteen minutes she suddenly fell back asleep. The first circumstance that struck us was the pliant limber state of the girl's arms, legs, indeed of her whole person. She could support no part of her frame. Great as seemed, however, the universal nervous debility, strength was given by making passes over each respective part. If the arms were lifted by the sleeve, they dropped as soon as they were unsupported, but if passes were made over and along them, they remained up. She could not stand, and when raised required full support: but passes downward before and behind her, from her head to her feet, gradually enabled her to require less support, till at length she stood firmly for a short time, when the temporary power being expended, she fell. Any one in the room produced the same effects on the patient.

By waiving his fingers in a curling course inside her hand and arm, the extremity was all bent inwards, and no one in the room could force it back; she was lifted out of the chair by several, merely suspended by her bent forearm; but a few waives outside the arm, in the opposite direction, instantly produced complete relaxation of the whole limb. A number of smaller phenomena which Dr. Elliotson considered as peculiar to this case were now exhibited. A movement of the manipulator's finger drew either lip upwards or downwards; the resemblance of a slight smile was caused by drawing out an angle of the mouth; and again by separating his hands before her mouth in opposite directions the learned manipulator made the month gradually open till she inspired deeply and yawned. The eyelids also opened in obedience to the operator's fingers, and the eyes were seen converging towards the nose, and were moved to the right and left with the utmost rapidity, in accordance with the movements of the finger. There was a remarkable tendency in the subject to follow any movement of the doctor; her hands or feet slowly and with some apparent difficulty rose or moved sideways, precisely according to the direction shown by his hand, though the muscular power seemed too weak to allow this to be done without effort, or to continue. By motion of the manipulator's hand, her arms could be brought into contact or forced asunder so firmly, that no one in the room (without a violence that we would be loath to use) could alter their position. A gentleman who was present from our office endeavoured, when the girl's hands were closed, to prevent them from separating in obedience to the operator's passes, and he declares that he exerted his utmost force without succeeding in keeping her hands closed together. After repeated essays, by calling very loudly in her ears, she showed that she possessed the auditory faculty by answering incoherently the questions of the doctor (whom she mistook throughout for her sister), by referring to some little family transactions that took place the day before, and expressing great impatience at Dr. Elliotson's repeated solicitations for a song. After much difficulty she at length complied, and sang a ballad in a rather sweet voice, breaking off, however, in the middle with an impatient expression, "How tiresome you are! There, I forget it." After some minutes she resumed, and finished the song, but her head fell to one side in deep sleep. She was then left in her sleep for a quarter of an hour, when she awakened suddenly of her own accord. The doctor acknowledged that he had himself no power of awaking her. We heard a number of gentlemen, who entered the room incredulous, admit they were obliged to believe what without seeing no power on earth could have compelled them to believe. Our readers we suppose must be indulged by those present with the same license, which we, in common with these gentlemen, would have desired for ourselves if absent. Such startling facts are not easily believed; yet what, after all, are they but (with few slight modifications) the common state of somnambulism, artificially superinduced?

T. P. H.

PENCILINGS OF LIVING MEDICAL MEN.

VINCENT—STANLEY.

—Mediocribus esse poetis

Non homines, non dii, non concessere columnæ.—HOR.

THIS aphorism, though true to poets, does not apply to hospital surgeons. The great majority rank in this class. Vincent and Stanley are colleagues, they are not competitors of Lawrence. They cannot be placed, even by their position, in the category of distinguished medical men.

The opportunities and responsibilities of a great institution like Bartholomew's, pre-suppose in the individuals who hold office commanding talents and sagacity, power to compare causes and effects, and profound professional research, a memory tenacious of substantial knowledge—strength and propriety of expression to impart it, powers of argumentation solid and massive to impress and to convince. To know dead and living languages is, to those to whom the instruction of youth is committed, a great intellectual advantage; to know their own, is an intellectual necessity which many of them have shamefully neglected. Their avocation is exalted, it is to bring philosophy into action for the benefit of mankind. Their theatres, like the groves of the Lyceum or Academus, should be crowded with pupils, and they should glory in the high and useful dignity and destiny allotted them of expounding nature's laws.

Iatros gar philosophos isotheos.

Medicine has been called the science of experiment. We cannot anticipate the great results a mind capable of applying itself to the discovery and application of general principles might produce. What splendid bulion might be extracted from a shaft, sunk by a master hand, in such a rich, unexplored, and inexhaustible mine! What refreshing fruits from assiduous cultivation in such an extensive and fertile soil! The mere mechanical surgeon is worse than useless in such a situation. We hold such a man in very low estimation. Hunter used to say, "to perform an operation, is to mutilate a patient whom we are unable to cure;" it should, therefore, be considered as an acknowledgment of the imperfection of our art.

We hold, too, that mere clever men, whose only sign of acuteness lies in a keen cunning eye to their own interests—that persons of narrow minds and limited acquirements, who have come to the profession with views rather connected with pecuniary profit than to the cultivation of science in its exalted sense; that such men who are only competent to apply those principles already discovered to purposes of practical utility; who are not men of speculative science, who have not given evidence of pre-eminent mental power; that such men should not be allowed, by interest, intrigue, purchase, bribery, sycophancy, nepotism, or other unworthy means, to fill such important situations. All derive advantage from the triumph of medicine; poor and rich are alike concerned. The present and future generations participate in its effects. Mediocre and negative merit stands in the way and prevents genius entering the temple to reveal its secrets—to dispense its blessings—to interpret the page which nature and its deviation—disease, are daily disclosing.

As it is now, servility and intrigue are the precursors of success; there is only access to the sanctum through the porch of humiliating vassalage. So long as the present system is allowed to continue, we cannot expect it to be otherwise.

In France, Dupuytren, Bichat, Magendie, Louis, and Chomel were colleagues and contemporaries. They were elected by the system of concours. Each was in his sphere a con-

stellation, and had his crowd of satellites. It has been remarked that the Isles of Greece poured their thousands into Attica to hear the magnificent displays of her orators. To the Parisian school-students and practitioners flocked from every clime in great numbers, to drink deep of the fountains of knowledge fed by the great minds which such a system evokes, and who carry their fame back to every part of the world—a gadibus usque ad Gangem. Dupuytren once declared, that if there were no concours, the faculty of Paris would become the spoil of three families.

There the mind, as Bacon says, is the man; here the purse is the ruling principle.

The *Lancet* has, with a pencil of light and all the powers of truth, been indefatigable in the exposure and denunciation of this great abuse, and proved over and over again that the present mode is the worst that could be devised for the poor and the deserving members of the profession. It is too true that many a senseless noodle has learned his profession at the expense of the lives of his fellow-creatures; and that the hospitals, instead of being temples of mercy and compassion, have been converted into charnel-houses, where the poor have been slaughtered by the ignorance of butchering operators.

That the son should inherit the property of the father is an axiom we do not dispute, but as talent is not transmissible, we deny the analogy. At present they hold office by hereditary tenure. The son of Stanley expects, as a matter of course, to succeed his father, and so on; "the tenth transmission of a foolish face" feeling he has an imprescriptible right to the situation with so many important duties annexed until the parliament by a wise enactment in its contemplated bill shall interpose to prevent the continuance of this evil.

The governors who choose the officers of such institutions are engaged in the absorbing pursuits of commerce, and have neither time nor inclination, nor education to ascertain the capability of the candidates. The concours is the only safeguard against the incompetency of the electors and the elected.

The man of mind will not stoop to the ignoble means which the cunning will employ. He is beaten in the race. Rarely, and at distant intervals, we see a genius cutting his way through the mountain of obstacles that interposes. For one that succeeds a thousand failures counter-balance this isolation. How few work their unsubdued way against the tide of adverse circumstances!

Haydn has said, "Look down upon genius and it will rise to a giant—attempt to crush it, it will soar to a God." A beautiful sentiment. There is more of poetry and illiteration in it than truth and reality. John Hunter never would have been an hospital surgeon save for the interest of his friends, and that magnificent monument of his genius, the museum, would have existence only in his brain.

We cannot, if we would, be-praise metropolitan hospital surgeons. The profession has done much for them—what have they given in return with the mighty magazines, with their vast appliances, with the book of nature open before them? Have they built to themselves a tower, whose top will reach the heavens, or made to themselves a name in the splendid muster-roll of illustrious men? Have they added one brick to the noble building? Have they wove one web in the rich and varied web of medical philosophy? Truth and justice obliges us to answer in the negative. Harvey, Pott, Abernethy, Lawrence, are the only names that illuminate the dreary history of that institution, like fountains of light—the others die, and leave no sign.

The place showeth the man. He himself

furnishes the materials of his character, and sometimes of his condemnation. If not fit for it, he must abide the disagreeable necessity of being told so, as we have resolved to declare our honest impressions of public men in public positions impartially, and without meretricious adulation. Our path lies between the extreme lines of flattery and censure:

No levelled malice
Infects one comma, in the course we hold.

In conveying the pictures which character has created in our minds, we would regret if we caused a painful emotion in any human being.

These general observations force themselves upon our minds, as we think of the men who perform the important duties of hospital surgeons.

Vincent is a man of about 62 years of age, slight genteel figure, marked sallow countenance, with a hooked prominent nose. He wears an old brown wig; it is plastered over his head and face. He always dressed in a plain body coat, of a still more distant date. His ancient plainness of manner—his opposition to notoriety, bordering almost on repulsion, keep him within the less alluring destiny of his official duties. The lecture-room has no charm for him. He has nothing to do with the school attached to the hospital. He makes no pretensions to pre-eminent abilities. He is a man of a most virtuous heart, amiable to a degree almost approaching weakness. It has been said that the best men cannot pass through life without censure; he seems secure from every attack of this sort. He is of the old school of surgery. He is an excellent surgeon; he has been, and in many instances is now, the best operator at Bartholomew's. His sense of touch is exquisite; he displayed it recently in his accuracy of diagnosis in a case of stone, when Stanley had misdirected the lithotriteur, or was supposed to have done so. Pott's old practice of attempting to do what Houston has very properly termed an impossibility, viz., to relax all the muscles of a fractured limb, he tries to carry out. He treats them with short splints, and the consequence is that many go out with short limbs.

He is neither a writer nor a speaker. He once read a paper on fractures of the fingers, which the Medico-Chirurgical Society would not publish, and delivered an oration on his retirement from the President's chair, which the College ought to buy up, and consign to the tomb of the Capulets.

[We have been obliged to postpone the remainder of this extremely interesting article to our next number.—ED.]

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL.—Prizes were thus distributed on Monday, the 25th instant:—Clinical Medicine—Prize, Mr. Robert Webb Watkins; Honorary Certificate, Mr. Samuel Hallet Griffith. Clinical Surgery—Prize, Mr. Robert Barnes. Practice of Physic—Prize, Mr. Edward Bullock; Honorary Certificate, Mr. Robert Frith Jarvis. Surgery—Prize, Mr. James Dunn. Materia Medica—Prize, Mr. William Spackman; Honorary Certificate, Mr. Walter Haldenby. Anatomy, Senior Prize, Mr. George Sayle; Honorary Certificate, Mr. A. G. Field; Junior Prize, Mr. Thomas Clark; Honorary Certificate, Mr. Kingsley. Midwifery—Prizes, Mr. Robert Frith Jarvis; Mr. Henry Wm. Fuller. Honorary Certificates, Mr. John Baber; Mr. S. H. Griffith; Mr. Edward Tegart. Botany—First Prize, Mr. S. H. Griffith; Second Prize, Mr. F. S. Tate; Honorary Certificate, Mr. Griffin.

ROYAL COLLEGE OF PHYSICIANS.

Wednesday, March 11, 1842.

LECTURES ON MATERIA MEDICA.—NO. VI.
BY DR. ROUPELL.

DR. ROUPELL stated that it was his intention at the present meeting, by way of conclusion to his course, to take a general review of the principles obtained from the roots of plants, to make a few remarks upon the names given to them, and to offer some conjectures respecting their mode of action upon the system.

It was pointed out, in the first place, that the roots and underground stems of plants yielded some of our most active medicines, furnishing us with remedies suited to very various and different complaints. These were, for example, *stimulants* and *antispasmodics*—as valerian, assafoetida, and pellitory; *tonics*, as gentian and calumba; *astringents*, as tormentil and spigelia; *aperients*, as hellebore, scammony, and jalap; *febrifuges*, as dilac and ava; *sedatives*, as aconite, solanum, and colchicum; *diuretics*, as squill and asparagus; *emetics*, as viola and ipecacuanha.

With regard to the nomenclature of the proximate vegetable principles, it was observed, that it usually had reference to the plant from which they were procured. This custom, useful as it was in aiding the memory on one point, was open to objection on others, from the fact that the same principle was found in, and therefore equally belonged to, many plants. Cinchonia, for instance, was not confined to the cinchona barks, but was present in the cusparia. Piperine was one of the constituents of the chamomile and tansy, as well as of the peppers. It might in future be better to assume when ascertained the effect as was done in the case of tannin, so largely furnished by the vegetable world; and in that of emetina, which belonged to the ionidiums and violas as well as to the cephaelis ipecacuanha. Perhaps it were too late to alter this, but it was not so with respect to the termination of the name which might be made to convey an idea of the composition of a principle; which acid might be alkaline, or neutral. It was suggested, that in conformity with the modern systems of chemistry, the vegetable alkalies should, like potassa, soda, and ammonia, keep the final "a"—as quina and strychnia. That such principles as contained four elements, oxygen, hydrogen, carbon, and nitrogen, but which had not an alkaline reaction, should, like caffeine, terminate in "cin," which would give us fungein and asparagein, while the ultimate "in" might be restricted to tertiary, salts neutral to test paper, as salicin, colocyntbin, &c., &c.

In the last place it was proposed to treat of the action of these vegetable principles as medicinal agents upon the human frame; that assemblage of numerous organs, each in itself simple, but from their number and properties forming a complex whole.

It was assumed as an axiom, that the symptoms which result from the operation of remedies, arose from the influence they exert upon the functions of the body. This is accomplished by certain effects upon the vascular and nervous systems. Some agents combine with the animal fibre itself, and thus by forming insoluble compounds with the tissues, effectually disturb the performance of their office; this, however, is chiefly confined to metallic bodies, not incident to organised beings, and therefore foreign to our immediate inquiries. The effects of vegetables upon the vessels may be viewed as twofold; one of which is to excite, as it is termed, their irritability; the other is to astringe them.

The action of astringents seems more easy to be understood than that of irritants. A simple change in the proximity of the particles is all that is required. Such perpetual alterations are produced upon the surface of the body by heat or cold, occasioning its contraction or enlargement; so many physical means occasion the approximation of the molecules—such as the diminution of the watery particles, or the alteration in the quality of the circulating fluids, that there appears no necessity for supposing any especial vital action for the attainment of this object.

The opposite state of the tissues, that which gives rise to sudden determination of blood, is a problem more difficult of solution. Mental excitement, and all stimuli, occasion local congestion—the mere contact of a foreign body provokes it. The result is the enlargement of the calibre of vessels. It might be *a priori* supposed that their texture would in consequence become more compact, and that the escape of their contents would in consequence be impeded. Inflammation is not a mere stretching of vessels, the particles composing them must be more distant from the readiness with which the contents escape. A change in the blood itself may assist us partially in accounting for these phenomena; but highly inflammatory blood does not, of course, necessitate effusion, and the instantaneous effect in sensitive parts militates against this as a complete explanation. To say that there is “an increased affinity between the blood and the tissues,”* or that in acute congestion “the tone is lowered,”† are expressions rather indicating the condition of parts than the mode by which it is produced. Some further knowledge of the properties of the animal fibre is required to enable us to state the changes which ensue in its altered mode of action. We know, however, that local impressions produce it, and that when once set up, it propagates itself; it passes from point to point, from one portion of tissue to its neighbour. We see this exemplified in an infinite variety of circumstances; the dilation of canals allowing calculi to pass; the spreading of inflammation in the skin and mucous membranes, in erysipelas; in short, in all cases of local action. These illustrations serve to point out that much more belongs to the part itself than is usually believed in cases of irritation. Abundant analogy is furnished in animals of lower organisation, and in vegetables of rapid changes of fibre, on the application of stimuli, as from a straight to an incurved line, which alone if shown to exist might go far in explaining the phenomena in question, and the *modus operandi* of a large class of remedies, such as excite local determination and increased secretion—as rubefacients, vesicants, diuretics, aperients, &c.

In approaching the operation of medicines upon the nervous system, we have remote as well as local effects to account for; we have sensation and motion, both voluntary and involuntary, to consider. We have the functions of the brain, of the spine, of the ganglia, and of the nerves to look to, any of which may separately or all may simultaneously be implicated. There is a necessity for a recipient, a sentient, and a communicating portion, and we are frequently deceived by our own feelings as to the seat of disturbance.

In this part of our subject we are left without the indications afforded by the palpable phenomena of vascular action, which so clearly point out both the seat and nature of local disorders. Many impressions upon the nervous system must be quite independent of any spe-

cial alteration of the vessels. Some change there can be no doubt, however, does exist, and this may be pointed out by viewing separately the simplest processes of nerves—the automatic movements, independent of sensation. Touch a nerve of motion, and contractions result in the muscles which it supplies; these contractions naturally result from the simplest irritation of this part. Consider next the function of a sentient nerve, and inquire how impressions made on the ear and eye are conveyed to the brain; we find this to arise from undulations; we have then only to apply the theory of undulations to the sense of touch as well as to those of sight and hearing, to explain one great class of nervous phenomena, sensation in the first instance and then involuntary motion. A further step is yet requisite, to prove, the continuity or proximity of parts; let the law on this point be called to mind, that “nerves of motion take their rise from the same region with those nerves which transmit the impression, by which their action is usually regulated.”‡ This explanation is quite sufficient to account for simple sensation (independent of consciousness) in the first place, and reflex movements in the second. Many arguments in support of this idea might be quoted—such as the effects of pressure upon a nerve, or of plethora, and the tubular structure of the nerves themselves.

When consciousness is suspended, the power of the will interfered with, and the mental faculties disturbed, greater difficulties are to be encountered in the way of explanation, from the number of organs affected. Besides the spine, the seat of simple sensation and motion, we have the brain, the seat of the mental powers, the medulla oblongata of volition, and the faculty of sensation,* all concerned in the action of narcotics; still the laws of nature are simple, and by adhering to our rule that medicines influence function, and proceeding analytically, we may approach the explanation of this important class of sedatives. Insensibility, coma, narcotism more or less profound, is the great feature of this order of remedies. In the first place this condition should be viewed as antagonising consciousness, and inseparable from its existence; in order to be for a certain time awake, it is essential that sleep should take place. Under ordinary circumstances it occurs periodically, but insensibility may at any time be produced by causes which disturb the circulation through the brain, as by ligature on the large vessels or round the neck, and by all unusual and powerful impressions—such as extensive injuries, great cold, hasty draughts of alcohol, and by the want of the due purification, or of the proper changes in the blood.

If proceeding thus analytically we turn to the operation of narcotics, we find that they act very variously—some producing an effect especially on sentient nerves, as aconite, others on the muscles, as conium—but all producing stupor and an alteration in the circulating fluids. Opium applied to muscles paralyzes them—placed in contact with a nerve it deprives it of the power, even of conveying the stimulus of galvanism.† We have thus evidence of a local effect, one, however, which will not explain the general results of its ingestion. To produce its operation on the system it must enter the vessels, and then what ensues? Excitement in the first place, if the quantity be small; if a large dose be taken, the organic processes are all interfered with or disturbed, digestion is disordered, bile is not poured out, the secretions from the intestinal canal and bladder are diminished; the excretions, too, would appear not

only to be altered in quantity but modified, more lithic acid is formed, and from numerous experiments made by the lecturer, it was shown that more carbonic acid is eliminated. Thus it may be inferred that the ganglionic system, the organic nervous fibres, and the sympathetic, are chiefly concerned. The other phenomena are capable of receiving a consequent explanation, viz, the headache, vertigo, and stupor, which at all events we see to take place when the secretion from the kidneys is suspended, and when carbonic acid is present in excess.

What the actual result of taking opium upon the nerves may be, is yet uncertain. It is not clear whether mingled with the blood it resists decomposition. The elements of morphia, combined as they are in that principle, resists many chemical agencies; it may be boiled repeatedly in alcohol without injury—it may be combined with acids, and thrown down again and again unchanged—it may be mixed with an infinitude of substances, yet re-produced in a state of purity—it resists putrefaction. MM. Orfila and Lesneur have made numerous experiments on this subject. They found the traces of this salt between fourteen and fifteen months after it had been exposed to the air, in contact with portions of intestine and soup containing both animal and vegetable substances. In this instance the quantity of morphia was a drachm and a half, but they detected in an experiment where six grains only were employed. These were dissolved in a pint and a half of water, into which a portion of intestine twice the length of the body was immersed. The whole was left exposed to the air from the 18th of July, 1826, to May, 1827. The analysis was then made, when, in spite of the putrefactive fermentation, the vegetable principle was discovered. When the acetate of morphia in solution was left exposed to the atmosphere, these able investigators observed that the acetic acid had undergone decomposition, but that the morphia remained unchanged.*

Many salts resist the operation of digestion, or in solution are absorbed, and, like nitre, ejected, unchanged, from the system. If this were the case with morphia, we should find it in the excretions and animal fluids. We have evidence to show that leeches applied to persons under the influence of opium have died. That an infant at the breast has suffered stupor after the mother had taken a dose of this narcotic. That opium has been detected in the blood, in the perspiration, and in the urine of persons labouring under its effects. This would appear conclusive, were it not that M. Lassaigne has assayed under similar circumstances to detect the narcotic, yet failed to produce it. We may then admit our uncertainty upon this head. This further investigation of the structure of nerves, may throw light upon the phenomena of nervous action. The nerves are tubular, they contain fluid. Is there a circulation within these tubes? Are they capable of distension? Much then still remains to be made out, but in establishing certain points, the insensibility of the muscles by contact, for example, the necessity in order to produce constitutional effects, that narcotics should be absorbed, the disturbance of the nutritive functions in consequence, and some local effects also, as is shown by the severe itching of the skin, which not unfrequently ensues, are all important. The mental faculties are disturbed, but not so deeply in cases of narcotism as in actual injury to the brain, such as in apoplexy. The best means for dissipating the stupor would lead us to argue that the brain was only affected secondarily, for rousing the patient by all possible means, and securing the purification of the blood by respiration in the air, are the effectual antidotes.

* Muller's Physiology, p. 225.
† Mayo's Physiology, p. 25.

‡ Mayo's Physiology, fourth edition, p. 262.
* Muller's Physiology, by Baly, p. 828.
† Muller's Physiology, p. 636.

* Orfila et Lesneur, *Exhumations Juridiques*, t. 2, p. 303.

The result of habit in rendering the system insensible to the agency of opium; in reducing a large dose to the effect of a small one as it were, and serving to produce excitement instead of sleep, is a topic of great interest, but is one upon which Dr. Ruppell stated it was impossible at this time to enter, and he trusted, in conclusion, that the difficulties of his subject would plead an excuse for the imperfect manner in which it had been treated.

CLAIMS OF DRUGGISTS.

To the Editor of the 'Medical Times.'

SIR,—As the claims of the Druggists are now agitating the medical world, permit me, through the medium of your valuable journal, to offer a few remarks upon the subject. I would ask who the Druggists are, and what are their claims? I believe a Druggist is one who keeps a shop for the sale of drugs, &c., but is not a licentiate of the Apothecaries' Company, and, I fear, they are too often very illiterate men, of which I will give you an instance. Being from home the other day, I went into a chemist's shop in Canterbury, and wrote a prescription, expecting, of course, to have it prepared; the sapient master of the shop looked at it once or twice, and then told me if I would translate it he could make it up. Feeling of course surprised, I made inquiries, and found he had been a purser on board a man-of-war. Now, sir, I ask, is such a man as this fit to be intrusted with the lives and happiness of his fellow-creatures? And yet this is only a solitary instance out of a number that I could produce, of the incapability of these men to prescribe for patients. Is it to be expected that gentlemen will spend their time and money in qualifying themselves to practise, if these men are to step in between them and the fruits of their labour? It was formerly an honour to belong to the profession, but now every quack styles himself surgeon. I think the medical profession are a great deal to blame; they are so occupied with petty jealousies that they do not attend to their interests. As a body I would bid them remember that "Unity is Strength."—I am, Sir, yours respectfully,

A RETIRED NAVY SURGEON.

Dartford, April 25, 1842.

REVIEWS.

An Inquiry into the Nature and Pathology of Granular Disease of the Kidney and its Mode of Action in producing Albuminous Urine. By G. Robinson.

MR. ROBINSON'S object is to reconcile with "the probability of the congestive or inflammatory character of the disease all the numerous varieties and irregularities that have been observed in different cases." Though we give Mr. Robinson much credit for the industry he has shown in collecting together the evidence which supports the opinion of the congestive character of the disease, and the ingenuity and good faith with which he applies it, we yet cannot be persuaded that he has succeeded in his task. The field, though not discreditably occupied, is yet left open to another inquirer.

Mr. Robinson thinks that the granular deposit and other peculiarities distinguishing it from diseases of constitutional origin, is a local affection, and that Dr. Christison's "acute stage" is merely acute nephritis, and that the various morbid appearances shown in the chronic state are so many results of chronic inflammation of the kidney.

"All authors seem to have agreed," he says, "that the acute stage or form is a congestive, if not an inflammatory disease of an acute character, and have regulated their treatment accordingly. M. Rayer considers it to be a variety or modification of inflammation, and calls it albuminous nephritis. Dr. Christison says, 'that it is not improbable that some of the instances, where a dark,

flabby, enlarged state of the kidneys has been found in connexion with coagulability of the urine, &c., have been nothing more than cases of ordinary inflammation, or pure nephritis:' whilst M. Solon conceives that true nephritis is quite another disease; but his distinctions between them are destroyed by Dr. Christison, who, however, so far from asserting their identity adopts an arrangement which recognises the existence of an acute congestion or inflammation of the kidney distinct from nephritis; and moreover says, 'In this city (Edinburgh) we have few opportunities of ascertaining the diagnosis between nephritis and granular degeneration, as the former is an extremely rare disease.'

He compares the symptoms of the acute stage with those of acute nephritis, and shows a general amount of resemblance. Following Dr. Bright (whose lucid arrangement indeed well deserves the compliment), he breaks down the varieties of morbid appearances presented by the disease into two divisions, the kidney in the one, from the granules being more closely packed together, being lessened in size, and hard, and in the other, increased in size, while at the same time the cellular tissue separating the granular has its place supplied by a morbid effusion, which, whether albuminous or not, we shall not imitate Mr. Robinson and say. In both of these varieties, he thinks that inflammation must have existed for some time, sufficient to enlarge the Malpighian corpuscles, by the coagulation of the blood contained in their vessels, and he considers that the various shades of colour they manifest are caused by the imperfect absorption of the colouring matter of the blood.

"But, in the first case," he says, "from the contraction and induration I should feel disposed to consider the disease as one of long continuance, and from the absence of any interstitial deposit it appears highly probable that a sufficient degree of inflammation, to produce albuminous effusion, had never existed in the organ, but that from some slight obstruction, retardation of the circulation through, and consequent fibrinous deposition in, the vessels of these corpuscles had gone on slowly and gradually to the destruction of the surrounding healthy tissue by absorption from their pressure. In the second form, the cause having been more intense in its action, and the examination of the organ having probably taken place at an earlier period, the appearances are very different. The congestion has been so great as not only to cause enlargement of the granules, but also to induce albuminous effusion into the intergranular cellular tissue, and of course the extent of this effusion will vary in different cases. This form may be considered as holding an intermediate place between the former or more chronic, and the acute stage first described; it may therefore be termed sub-acute nephritis. Hence a practical division of cases of nephritis, founded on their morbid appearances, into three forms or degrees. 1. The acute, in which the engorgement of the vessels has been so great as to cause their rupture, and sanguineous infiltration of the organ. 2. The subacute, or that accompanied with more or less interstitial albuminous deposit; and, 3. The chronic, in which the congestion has never been sufficient to produce any permanent kind of effusion. Suppuration may supervene on any of these forms, but in general only occurs in the two former."

Mr. Robinson goes on repeating various experiments of his which bear closely on the question, and touches upon the various points which as necessarily incidental to it call for a passing notice. We can only glance at his final deductions. Learn first, he says, if albumen be present, and secondly, what is the cause? If the bladder and urethra be innocent, considered as the cause, it is proper to look for it in congestion of the kidneys. The albumen in the urine will be the measure of the inflammation. And when the existence of the affection is discovered, the cause of this in its turn should be inquired into, and

the treatment proportionably varied. In the acute form, Mr. Robinson recommends a vigorous plan of treatment, frequent local and general bleeding, powerful cathartics, and diaphoretics, &c. In the chronic he advises a milder form of treatment, based, however, on the same principles. Diuretics he strongly condemns so long as there is continuance of the supposed cause (congestion).

"It even seems to me quite possible," he adds, "that large doses of diuretics given in the advanced stages of the disease, when the function of both kidneys has to be performed by a minute remaining portion of secreting tissue, may materially hasten the fatal termination by increasing the degree of renal congestion. Any arguments derived from an apparent increase of the solids discharged from the system in the urine under the use of diuretics must be more or less subject to fallacy, as it has been observed by Woehler, that all substances acting as diuretics contain principles which are themselves excreted by the kidneys."

Here we conclude our notice of this little book of 77 pages, every one of which contains a reason why our readers should make themselves its possessor. There is a bold spirit of inquiry in the writer, which, when supported as in this case by reading and some personal experience, always wins our warm approbation.

MEDICAL MEMS OF THE WEEK.

By PERISCOPICUS.

STRUMOUS IRITIS.—The hydrochlorate of baryta has been highly spoken of, both by Mr. Philips, in his lectures on surgery, and also by Dr. Payan, as a valuable remedy in strumous ophthalmia.

CAPSULAR RHEUMATISM.—Dr. Macleod states that capsular rheumatism differs essentially from rheumatic fever in its symptoms, terminations, complications, and seat; it is, he says, in various respects, closely allied to gout. Dr. Chambers has observed, in a few cases of rheumatic gout, a white deposit of carbonate of lime in the joints; but this would appear to have been a rare exception, for it is stated by Drs. Prout and Macleod, that in all the cases examined by them—the deposit into the joints was the *lithate of soda*. Dr. Macleod says, that *suppurative disorganisation* of the joint is of much more frequent occurrence than has been suspected; he states he has never seen it in any other form of rheumatism than the capsular.

PALPITATIONS.—Dr. Constatt says, that palpitations from cardiac disease are hereditary, and always precede the cachectic colour and appearance of the patient—never depart, but continue always more or less violent; stimulants aggravate these affections. The lips and cheeks are livid. *Digitalis* and *Conium* are very useful, and tend to allay this peculiar affection.

CANCER.—Dr. Carpenter says, that in the various forms of cancer, it has been shown by Müller and others, that the new growths consist of a mass of cells, which, like the vegetable fungi, develop themselves with great rapidity, and which destroy the surrounding tissues by their pressure, as well as by abstracting from the blood the nourishment which was destined for them. These parasitic masses have a completely independent power of distinct existence; they can be propagated by inoculation, which conveys into the tissues of the animal operated upon the germs of the peculiar cells that constitute this morbid growth, and these soon develop themselves into a new mass.

ERYSIPELAS.—Mr. Nunneley says, that it is an easy thing, for the purpose of producing an immediate effect, or "knoeking the disease on the head," as it is often termed, to take from a man two, three, or four pounds of blood; but,

should he survive, the probability is, that he will not for several years, if ever, be the sound man he was before the shock.

INDIGESTION.—Dr. Watson says, that indigestible matters, to which the pylorus refuses a passage, may remain in the stomach, and disturb its functions for days, or even sometimes for weeks together. Sooner or later vomiting is set up, and the offending substance is removed or expelled. He lately witnessed a *mass of hard curd—a small cream cheese* in respect to consistence, which was thrown up after several days of severe gastric pain and disorder. The relief was immediate and complete. The patient had been taking large quantities of *cream* with his *tea* and *coffee*. In another person, a similar fit of indigestion terminated in the ejection of a mass of snuff. This is no unusual source of derangement of the stomach among those who use lavishly that nasty luxury.

SUFFOCATING COUGH.—Mr. Robinson recommends closure of the patient's nostrils with the thumb and forefinger during expiration, and leaving them free during inspiration, when a paroxysm of suffocating cough is present, and he says that in a very short time the patient will be relieved. He adds, that he has adopted this plan whenever he found a suitable occasion, and always with success.

ASCITES.—The *syrup* of the *iodide* of *iron* is strongly recommended in cases of dropsy, particularly where debility is a predisposing cause.

STATISTICS OF DISLOCATION.—M. Malgaigne has examined the registers of the Hotel Dieu, and has ascertained that out of 229 cases, 1 occurred between 2 and 5 years; 4 between 5 and 10; 8 between 10 and 15; 29 between 15 and 20; 32 between 20 and 25; 40 between 25 and 30; 48 between 30 and 35; 38 between 35 and 40; 45 between 40 and 45; 51 between 45 and 50; 52 between 50 and 55; 51 between 55 and 60; 51 between 60 and 65; 42 between 65 and 70; 19 between 70 and 75; 13 between 75 and 80; 4 between 80 and 90; and one at 90.

LUXATIONS.—Mr. Malgaigne states that luxations are rare in early infancy, and rather more frequent towards puberty, at which period they suddenly increase greatly in number; this continues to enlarge up to the fiftieth year, and then, contrary to the general opinion, it remains stationary for the next fifteen years. The proportion of dislocation between the sexes is in or about 2.92 men to 1 woman.

DISEASES OF THE SPLEEN.—1. Mr. Annesley says, that the enlargements of the spleen are sometimes to a very great extent, the spleen weighing ten or twelve pounds, and yet no sensible alteration can be detected in its substance by the unassisted eye. Frequently, however, its structure is at the same time much changed, its colour being much deeper, its consistence greatly diminished, and it is rendered more friable, so as scarcely to admit of examination without falling to pieces. Its external membrane is also often torn with ease; sometimes it is thickened, more vascular, and occasionally cartilaginous, in whole or in part. 2. It is in some cases ossified in various places, and in others covered with large patches of coagulable lymph and albuminous concretions. In such cases it frequently adheres to the adjoining surfaces and viscera. 3. Its internal structure frequently contains purulent collections, sometimes apparently unencysted, and flowing through its substance, at others, enclosed in one or more distinct cysts. It is also subject to tubercular formations, and to hydatids. 4. The spleen is sometimes found smaller than natural, and dry and shrivelled; but this is comparatively a rare occurrence in warm climates. 5. Instances have occurred wherein it has been ruptured from the congestion of blood, to which it has been

subject in the cold stage of an ague. 6. Its internal substance has been found reduced to a grumous and *pultaceous* mass.—Dr. Hodgkin calls these fibrous coverings of the spleen a *peculiar heterologue tissue*—"Sui generis."

ASPHYXIA.—The experiments of Dr. Edwards of Paris, respecting asphyxia, are already known to many members, though not probably to all, of the profession: and we have no doubt that it will require strong facts to induce the older practitioners to alter their mode of practice in resuscitating still-born infants and adults: but such facts seem to exist. Dr. Edwards has proved that asphyxia takes place much sooner in a warm than a cool medium. He has found that new born mammiferous animals die most slowly in water at about 60 deg., which is ordinarily cold water; and that they die more rapidly as the water approaches blood-heat. He advises that persons in a state of asphyxia should be exposed to the cool air, and that the application of heat should be avoided. Mr. Snow very ingeniously explains this circumstance by supposing that the deleterious effects of heat in suspended respiration depend on "its stimulating the capillary circulation, and thus promoting the de-oxygenation of the blood" in a more rapid manner than would be the case when the surface was cool; in other words, when the surface is cool the capillary circulation is less energetic than usual, and consequently there is a preservation, in some degree, of the oxygen of the system. When we consider the great number of still-born children, some writers affirming that one child in twenty are so, it is of the greatest consequence that a safe mode of practice be adopted in these cases, and we are strongly disposed to think, that hitherto the practice of applying heat, and especially in the form of hot baths, is pernicious; for we must remember that the hot bath has not only the bad effects of heating the surface, but prevents that surface from being acted upon by the oxygen of the atmosphere, which it will be more or less when exposed freely to its influence. Dr. Scholer, of Berlin, relates two successful cases in which the apparently still-born children were immersed in cold water, the temperature of which, however, is not named in the English journal, but we suppose the experiment would be founded on the facts related by Dr. Edwards of Paris, and therefore, we take it, the temperature would be about 60 deg. Dr. Marshall Hall does not agree in this practice. Although he approves of the sudden application of cold to the warm surface as an effectual means of exciting respiration, he does not recommend the continued application of it. On the contrary, he says, "That it is not the mere application of cold, but the sudden application of cold to a warm surface, which is the effectual means of exciting respiration. It is the *sudden alternation*. To apply cold to a cold surface would only be to sink the general powers of life. The infant should be kept warm; the warm-bath may be required; and then cold water must be applied, in moderate quantity, but with force." He recommends what must strike every one as being a truly practical method of accomplishing resuscitation, namely, by exciting respiration by stimulating the excitors of that function, the *trifacial*, the *pneumogastric*, and the *spinal* nerves—the trifacial by *forcibly* blowing or dashing cold water in the face, stimulating the nostrils by ammonia, snuff, pepper, or the point of a needle, &c.; the spinal nerves by *forcibly* dashing cold water on the chest, thighs, tickling the sides, soles of the feet, and verge of the anus. M. Bandelocque states that since he has followed the opinions of Smellie, Schoret, Chaussier, &c., with respect to tying the navel-string, he has not lost a single case from asphyxia. This opinion is to delay

tying it for some time, when asphyxia is present; as the blood circulates for some time in the umbilical veins when it has ceased to be perceived in the arteries.—*Mr. Braithwaite.*

MEDICAL NEWS.

EVIDENCES OF STRANGULATION, AND OF BURNING AFTER DEATH TO DISGUISE THE CRIME.—At the last Yorkshire assizes Jonathan Taylor was tried for the murder of Helen Taylor, his wife, at Esdriek, near York. The parties lived on a farm of Lord Wenlock, consisting of two hundred and fifteen acres, and had a large family. Four years ago he formed a new and illicit connection, quitted his wife, and went to Hull, and Lord Wenlock made over the lease of the farm from the prisoner to the family. He ultimately returned at times, and was on such occasions employed in day labour on the land. On Tuesday, the 26th of October last, all the family left home at nine o'clock, to go to work, but the wife. Early on that morning the husband had also left, under excuse that he was going to Selby. At twelve o'clock two of the daughters returned home, and there found the deceased quite dead, lying upon the hearth, near the fire, upon her face, and apparently in a burning state, her clothes being on fire, and the lower part of her person considerably burnt. A bunch of keys was found lying under her. A medical man was sent for, and he arrived at about half-past twelve, and subsequently another surgeon. At the trial the counsel for the prosecution stated to the jury, that these gentlemen would say that from the appearances which existed when the body was first seen they had no doubt that the deceased had been dead for two hours, or a longer period. Therefore, whoever perpetrated the murder must have done so between nine o'clock and half-past ten. A further inquiry took place, and from certain marks on the neck, from the appearance of the face, and other appearances, the conclusion was come to that the death had been effected by choking or strangling, the surgeons believing that the burns must have taken place after death. The family went to a drawer in which, at eight o'clock that morning, the deceased had been seen to look at some silver, about 3*l.*, which she had kept there. She was seen to lock the drawer, and that drawer was found locked, but the money was gone. The keys were found lying under the deceased, and whoever, therefore, got the money, must have been making use of those keys. The keys were perfectly bright notwithstanding the fire. On the 8th of October 70*l.* was paid to the deceased by a person who had bought some stock of her, and that 70*l.* was seen by the prisoner to be taken into a room where the family were in the habit of depositing money. Other circumstances tended to fix the act of guilt upon the husband. He was accidentally spoken to by a miller in the house at half-past nine that morning. At a quarter past ten he was seen on the road, by a private track, from the house to Selby, in which track was found a bottle of rum, which belonged to the house. The 3*l.* in silver were gone, so was Lord Wenlock's agreement with the family, and a policy of insurance on the stock. Some plate was not taken. The husband reached Selby at half-past eleven o'clock. It turned out that he had no business to transact there, but occupied his time in public-houses in the town. He returned to the farm before three o'clock, and then denied that he had been at home since six a.m., and told other untruths respecting the places he had visited on that morning. The trial of the husband for the murder took place before Baron ROLFE on the 5th ult.

Depositions prepared for Counsel, by W. C. Anderson, Surgeon, Lecturer at the York School of Medicine, Deputy Surgeon to York Castle, &c.

Post-mortem examination, made Oct. 27, 1841, about twenty-nine hours after death.—

External appearances. The whole of the head and face extending down below the thyroid cartilage of the neck was much swollen or bloated, and of a purple hue, including the ears; the eyes full, prominent, and bloodshot; the mouth closed. Tongue not examined. There was a decided fulness and thickening of the occiput, corresponding with an extensive congestion of the integument, and a collection of fluid blood between that and the skull. Immediately below the swelled portion of the neck there were two dark brown, crackly, and hard marks across the front portion of the neck, and extending from these (to the left side especially, and still more indistinctly to the right) were slight indentations formed by pressure. In turning up the dark brown portion, I observed several small blood-vessels *inflammatorily* injected. The body was extensively and severely burnt; the right side more particularly, especially on the lower portion of the ribs, and just below them over the liver. The burnt part extended from this point obliquely downwards across the belly, slightly implicating the navel, and with less severity to the left side, and some way down the thigh of that side, and down the right leg to the knee; both hands were partially closed; the right-hand was severely burnt; the ends of the fingers with loss of substance and black. There were no material burns below the knee. There were some very slight burns on the back part of the right shoulder; there were no vesications containing liquid at or near any of the burns, and no swelling or inflammation on the edges of the burns.—**Internal appearances.** I divided the scalp across the head from ear to ear; from the first application of the knife, dark, very fluid, thin blood escaped in large quantities, and continued to run in a copious stream during the whole of the dissection of the head; the scalp was much darker and more injected than natural. The portion corresponding to the external swelling was much thickened and injected with small coagula in its substance, and some fluid blood between the scalp and the skull. The skull was very thin. After sawing through the skull the blood flowed still more copiously. On separating the dura mater from the skull, numerous points of blood issued out of both one and the other, and both were much darker coloured than usual. The brain was highly injected with blood which followed the knife after every incision, but was healthy in other respects. The chest and belly were only cursorily examined, partly because it was thought the case was quite clearly made out, and partly for want of time.—**Opinions.** The thickened, swelled, and injected part of the scalp on the back part of the head and its separation from the skull in that part must have been occasioned by coming in violent contact with some hard substance *during life*; it might have produced insensibility, but it did not cause death; the bloated, swelled, and dark colour of the head, face, and all the parts above the middle of the neck; the injected and dark-coloured condition of the brain, scalp, and membranes; the highly fluid state of the blood; the large quantity that escaped during dissection of the head; the horizontal marks across the neck with inflammatory injection, denote (I think quite clearly) *strangulation*. The marks on the neck have been produced in the first instance by the application of a ligature either partially or entirely round the neck during life, which produced the inflammatory injection underneath the skin, and the crackly hard part

apparently by the application of some hot substance to conceal the original marks, and made after death. From the absence of vesication and inflammatory swelling round the edges of the burns; from the great depth of some portion of the burns; from the fingers of the right-hand being so severely burnt (leading to the supposition of their not having been moved during the process of burning), all conduce to the belief that the process of burning took place *after* life was entirely extinct. The jury found the prisoner guilty.

BRITISH MEDICAL ASSOCIATION.—The British Medical Association have agreed to and signed the following petition against the Lunacy Bill:—"To the Honourable the Commons of the United Kingdom of Great Britain and Ireland in Parliament assembled.—The petition of the President and Council of the British Medical Association, humbly sheweth, that your petitioners have seen with regret, not less than surprise, a Bill presented to your honourable House on the 17th of March last, and since read twice, which professes to be for the better securing of a more effectual inspection of the private lunatic asylums licensed by the magistrates in quarter sessions throughout England and Wales, and in which it is proposed to commit to two barrister-commissioners the important duties of seeing that such asylums are properly conducted; that their afflicted inmates are judiciously treated morally as well as physically, and that such of them as may seem improperly confined therein are regularly discharged.—Your petitioners convinced from long experience and repeated observation that a proper and effectual supervision of the private lunatic asylums in England and Wales, not excepting those placed under the jurisdiction of the Metropolitan Commissioners of Lunacy, can only be secured through the agency of medical men of mature judgment and discretion (wholly unconnected with such establishments), versed in the knowledge of the physiological laws which regulate the connection between mind and body, and the reciprocal influence of the one upon the other when under disease,—view the intended appointment of supervisors or visiting commissioners, out of a class of persons wholly incompetent, from their peculiar education, studies, or professional pursuits, to understand these subjects, as a most unprecedented proposition, greatly to be deprecated, not only as inconsistent with sound experience, justice, and the progress of medical science, but also as militating against the interests of society in general, and certain to prove injurious to the very beings whom it is the professed object of the Bill to benefit.—Your petitioners refrain from making any remarks, as precluded by the practice of your honourable House, on the allegation of a want of habits of exactness in the medical profession in general (with a few brilliant exceptions), with which the said Bill is represented to have been first introduced into your honourable House; upon this point your petitioners might submit, that a declaration of such a nature would be a reflection on the character and abilities of English medical men which they can boldly declare to be wholly unmerited.—But your petitioners having no other desire than that of promoting the public welfare, in specially calling the attention of your honourable House to the Bill described in the present petition, cast aside every selfish consideration, and confine themselves to praying,—That your honourable House may not pass the said Bill for the better Supervision of the Licensed Lunatic Asylums in the Country, without altering the clause by which that supervision is henceforward to be delegated to two barrister-commissioners.—And your petitioners will ever pray, &c.

ROYAL INSTITUTION.—M. Solly, jun., delivered an interesting lecture, on Friday 22nd instant, on the means of measuring heat, which he illustrated by a series of well-conducted experiments. He gave a clear exposé of the general properties of heat, after which he proceeded to explain the construction of thermometers, showing the various improvements made in that important instrument, from the time when it was invented, 250 years ago, when the expansion of air by heat was trusted to as the measuring medium, to the present, when mercury is almost solely relied on. The distinctive characters of the thermometers of Delille, Fahrenheit, Reaumur, and the Centigrade were also alluded to, the preference being given to the last named. From this subject the lecturer passed to the consideration of the various pyrometers that have been made, showing the peculiar advantages and disadvantages of each, and terminated with displaying the powers of the electro-thermometer or galvanometer, which he effected with a very large instrument. The magnet of the apparatus in the theatre, which was one of considerable size, weighing several ounces, was markedly influenced, and put in motion the moment heat was applied to the galvanometer in the laboratory, with which it was connected by wires, extending underground a distance of 150 feet. The beauty and perfectness of this experiment drew forth continuous applause.

HOUSE OF LORDS, ANATOMY BILL.—Earl Stanhope presented a petition from an individual named Roberts, complaining of the violation of the provisions of the Anatomy Act. The petition stated that the 13th clause of the act in question provided that bodies after dissection should be interred in consecrated ground, and that a certificate of interment, signed by the inspector of the district, should be given to the Professor of Anatomy within six weeks after the burial. The petitioner alleged that these provisions had been disregarded, for that he had traced the interment of about 354 dissected bodies, between October, 1839, and July, 1841, in a piece of unconsecrated ground called Globe fields, and that on every occasion an undertaker's man had represented a minister of the Church of England, and read the church burial service over the bodies. The petition further alleged that certificates of burial had been received by Dr. Somerville from the undertaker's man as a legal document. The petitioner also alleged that he had seen many hundred weight of human flesh thrown into heaps, and allowed to rot, and that the bodies of paupers had been clandestinely removed to the schools of anatomy under the master of the workhouse in the largest parish in London. The Marquis of Normanby replied, but gave no answer to these charges.

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THE MEDICAL TIMES.

A Journal of English and Foreign Medicine and Medical Affairs.

No. 137. VOL. VI.

LONDON, SATURDAY, MAY 7, 1842.

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COURSE OF CLINICAL LECTURES ON PNEUMONIA.

Delivered at the Hospital La Charité, by Professor CHOMEL.

LECTURE. XIV.

Diagnosis of acute pneumonia.—To form the diagnosis of any local disease attended by more or less constitutional disturbance, we must bear in mind the following points: 1st, To discover the local lesion. Now, sometimes this lesion is *manifest*, at other times it is *latent* in different degrees. 2nd, The existence of the local lesion being ascertained, we must discover its seat, its extent and degree. These two problems belong to the *special or proper diagnosis* of the disease. 3rd, We must distinguish the disease from all those bearing any analogy with it; in a word, we must establish its *differential or comparative diagnosis*. The solution of these three orders of questions constitutes the *local diagnosis* of the affection. 4th, We must, moreover, study the general state of the patient, with regard to the *solids* as well as the *liquids*, or, in other words, establish the *medical diagnosis*, which is so important in a therapeutic point of view. 5th, We must, lastly, ascertain whether the disease exist alone and isolated, or whether it be *complicated* with one or more different affections. Such are the important questions to be resolved in studying the diagnosis of *pneumonia*.

ARTICLE I.

Does acute pneumonia exist? This question presents two different aspects. Sometimes the disease is of a frank character, exhibiting the whole of its local and general symptoms; at other times some of these phenomena are wanting, and the affection has a tendency to become latent. 1. In the first case, the diagnosis is easy; the group of symptoms, formed by dulness of the thorax, *supplementary* respiration, crepitation, bronchial respiration, bronchophony, pain in the side, dyspnoea, the pneumonic sputa, and fever: symptoms which are preceded by a shivering fit, and which take a certain order and duration; this group, I say, permits no doubt as to the existence of pneumonia. 2. It is, however, different where these symptoms are either totally or partly wanting; the diagnosis then becomes more or less difficult, and it often requires great tact on the part of the physician to discover the nature of the disease.

Of latent pneumonia.—The word *latent* added to a disease generally expresses merely the degree of tact possessed by the physician in forming the diagnosis: hence, an affection which remains latent to an ignorant or partially-instructed physician, may be manifest to one better informed; and thus we find that the number of latent diseases diminishes in proportion as science advances. Still there are cases in which the most instructed physician cannot reasonably admit the existence of a disease, as where the whole of its characters are not presented in a manner sufficiently marked: now, pneumonia often exhibits these anomalies, as I will show while running rapidly over the prin-

cipal forms of latent pneumonia. This subject deserves the whole attention of the practitioner, not only with respect to the diagnosis of the disease, but also in regard to its prognosis and treatment; for experience has proved that latent pneumonia, which often depends on some important modification in the organization, is of a graver character than that which pursues an open and regular course; that, arising often in subjects weakened by age or any other cause, this latent form of disease presents especial indications and requires great prudence in the employment of the means necessary for its cure.

Pneumonias latent in *different degrees* may, I think, be divided into twelve classes. 1. Pneumonia latent from the obscurity or absence of the physical signs furnished specially by percussion and auscultation; 2. from the feebleness or obscurity of the functional disturbance of the lungs; 3. from feebleness or absence of the general symptoms; 4. from the development of the pneumonia in the course of some other affection which entirely absorbs the attention of the practitioner; 5. from the sympathetic phenomena which are induced directing the attention of the physician to some other organ than the lung; 6. from the local complications obscuring the diagnosis of the disease or rendering it impossible by masking the physical signs peculiar to pneumonia; 7. by reason of the modifications caused by age in the local and general symptoms of the disease; 8. by reason of the modifications impressed on the local or general symptoms of the affection by an epidemic character; 9. from combined causes; 10. from auscultation and percussion discovering but a very small portion of its extent; this division, as we see, is closely allied to the first; 11. a pneumonia latent at first may afterwards become manifest; 12. and a pneumonia at first manifest may afterwards become latent.

Before commencing the examination of these different groups, I must premise by stating that it is not my intention to enter into all the details of those cases where pneumonia may become latent; this work would carry me much beyond the limits to which I am confined. I shall merely touch briefly on the principal circumstances which are capable of giving this character to pneumonia, referring you for more minute details to what has been already said of the local and general symptoms of this disease, of its commencement and progress, as well as what we shall hereafter have occasion to state of its proper and differential diagnosis, its complications, and the forms which it assumes according to the age of the subject affected.

1. *Pneumonia which is of a latent character in consequence of the physical signs furnished, especially by percussion and auscultation being obscure or absent.*—The signs furnished by percussion and auscultation are sometimes entirely absent; when, for instance, pneumonia occupies the middle part of the lower lobe, the root, or the centre of the lung; but then the expectoration, the pain, the dyspnoea, and the fever, are usually sufficient to clear up the diagnosis. It is especially in these circumstances that the study of the exaggerated or supplementary respiration may lead to the most useful results. It may happen not only that no râle is heard in the inflamed part, but even that a very strong, as well as pure respiratory bruit is given forth. MM. Hourman and Dechambre have instanced an occurrence of this nature in one of their patients at *Salpêtrière*; the pneumonia occupied the whole of the upper lobe of one lung, and auscultation was practised up to the period of death. Is it not probable that in cases of this kind the respiratory murmur of the sound side is propagated through the indurated lung? At other times the signs furnished by percussion and auscultation are masked by phenomena belonging to

other affections, which may be complicated with the pneumonia. Thus, when inflammation takes place in an emphysematous lung, the sonorousness of the thorax, which is greatly augmented in simple emphysema, will again become reduced to its normal character. On the other hand, crepitant râle, or bronchial respiration, may be masked by the sub-crepitant, mucous, or sibilant râles of bronchitis. Lastly, the signs furnished by percussion may be deceptive, when, for instance, the sonorousness diminishes equally and simultaneously on both sides of the chest, without, however, any true symptoms of dulness being present.

II. *Pneumonia of a latent character in consequence of the functional disturbance of the lungs being feeble or absent.*—In speaking of the functional signs of pneumonia, I said that they were sometimes very feeble, and even absent—that the dyspnoea, the pain in the side, and the cough are sometimes totally wanting, and that the sputa are either absent, or cease to be characteristic. We may thence comprehend, that unless the practitioner employ percussion and auscultation with care, decided pneumonias would easily be rendered latent to him. The physician then should not delay a careful examination of his patient till well-marked symptoms attract his attention. A very trifling febrile movement, and which in many cases consists merely in a rather frequent and developed pulse, a slight animation of the face or the cheeks, a little acceleration of the respiration, slight cough without expectoration, a trifling pain in some point of the thorax—these are phenomena, apparently of little importance, but which in reality are of infinite value as a means of diagnosis, and are of quite sufficient importance to direct our especial attention to the respiratory organs. Symptoms apparently of the most trifling nature may, with a view of diagnosis, conduct to the grandest results.

III. *Pneumonia of a latent character, in consequence of its usual general symptoms being feeble or absent.*—There are some subjects of but little excitability, in whom inflammation is developed, without producing a disturbance of the general system, of sufficient magnitude to direct our attention to the nature and seat of the affection; if in such cases we neglect to employ percussion and auscultation, we shall easily run the risk of leaving a pneumonia, often of great extent, undiscovered. This remark is particularly applicable to individuals affected with hemiplegia, mania, and idiocy, as well as those who are weakened by long fatigue, or who are in a general cachectic state.

IV. *Pneumonia, which is latent in consequence of being developed in the course of some other affection, which entirely absorbs the attention of the practitioner.*—The pneumonia which is developed in the course of other diseases, deserves in the highest degree to fix the attention of the physician; for it often remains latent, either from the primitive and principal affection absorbing entirely his attention, or from the peculiar nature of the malady, modifying some of the symptoms of the intercurrent pneumonia, as we shall see when speaking of inflammation of the lungs, developed in the course of typhoid fever, small-pox, and measles, or after severe surgical operations. The pneumonia is then so much the more alarming, as being frequently declared at the period of convalescence, the patient is already greatly debilitated; and from the rapidity with which the disease progresses, it is of the greatest importance to discover it early, so as to be enabled to combat it from its commencement.

V. *Pneumonia which is latent from the sympathetic phenomena which are developed, directing the attention of the physician upon any other organ than the lungs.*—“How easy would be the study of diseases,” said Bichat, “if they were freed from all sympathetic lesions! But who does not

know that these latter symptoms frequently predominate over those originating in the diseased organ itself?" This cause of error is especially observed in men of an excessively nervous and irritable temperament, as well as in women and children; the least inflammation is in them sufficient to give rise to a host of spasmodic symptoms of very varied forms, which change more or less the proper character of the disease, or else completely mask it. Frequently, for example, the delirium and convulsive movements, which are merely sympathetic of inflammation of the lung, have been mistaken for symptoms of arachnitis. Thus, *as a general rule*, whenever an individual presents signs of cerebral disturbance, we must examine, with the most *scrupulous attention*, whether there may not exist some other lesion than that of the brain. I was never more struck with the importance of this rule, than in the case of a man about thirty years of age, who had, previous to my seeing him, been subjected for several days to a vigorous treatment, as for acute meningitis, but whom I discovered, after a careful examination, to be labouring only under a very intense inflammation of the fauces. Notwithstanding a careful inquiry into the condition of the various organs of the economy, I was nearly overlooking the local affection which was the cause of all the symptoms. Having in fact asked the patient whether he had a sore-throat, or if the action of swallowing was painful, I was answered in the negative; and as he was excessively feeble and depressed, I was about to leave without further disturbing him, when recollecting how important it was in these cases to assure oneself perfectly of the state of all the organs, I determined on a careful examination of the throat, and there discovered a very advanced state of disease. A peculiar arrangement in this case, was that the *isthmus faucium* was remarkably wide; in spite of the tumefaction of the amygdalæ, it presented almost similar dimensions to those observed in the greater number of subjects in a state of health, and thus are explained the absence of pain, and especially the facility of deglutition observed in this patient; he was quickly re-established under the influence of a proper regimen, for he was already reduced by diet, and by free and repeated abstraction of blood.

VI. *Pneumonia of a latent character in consequence of the local complications either weakening or destroying its physical signs.*—Thus in bronchitis, from the abundance and intensity of the accompanying râles, we are frequently prevented perceiving the characteristic crepitation of pneumonia. Copious pleuritic effusion does away with crepitation, substituting a more marked dulness in its place, unless the liquid being free become displaced in consequence of the different positions given to the patient. Pulmonary emphysema, by diminishing the dulness of pneumonia, may in like manner be a source of error, where the other symptoms are at the same time wanting, &c.

VII. *Pneumonia which is rendered latent by reason of the modifications induced by age in the general or local symptoms of the disease.*—We shall, under this head, find a distinction of great importance. For if, on the one hand, the extended pneumonia of adults; of children from 6 to 15 years of age, and of new-born infants is easy of diagnosis, and seldom escapes the attention of a careful observer; the pneumonia of children from two to five years, and of old men, is, on the other hand, frequently very difficult of discovery. In the child from two to five, the lesion is lobular and disseminated, the signs furnished by percussion and auscultation are either absent or nearly so, or else masked by the râles of bronchitis, and expectoration is wanting. In old men the phenomena of reaction are often absent or deceptive, the local signs being masked by those of bronchitis or bronchial catarrh, and the expectoration, the cough, and the pain are often wanting.

VIII. *Pneumonia of a latent character in consequence of the modifications induced by the epidemic character of the disease in its local or general symptoms.*—Pleuro-pneumonia of the adult sometimes assumes the latent form which is so frequently observed in the old man. This kind of pneumonia appears sometimes to become epidemic. Thus, M. Fleury relates that in the space of three

weeks, he observed a great number of adults affected with pleuro-pneumonia, who almost constantly presented the following symptoms: headache, fever, a slight degree of cough and dyspnoea, but no pain in the side. On auscultation and percussion, there were found the signs of very slight effusion. Two days afterwards, crepitant râle appeared over the greater part of the lung; there was no pain in the side, nor any rusty-coloured sputa. The pneumonia then passed rapidly to the second stage, and the patient sunk. We shall also see, when speaking of epidemic pneumonia, that this inflammation appears very often in the course of some other diseases; that it is very rarely free from all complication, and consequently that it may without difficulty escape the attention of the practitioner.

IX. *Pneumonia which is latent from combined causes.*—In the most complex cases we shall find the pneumonia remain latent in consequence of the *reunion* of the following circumstances: the physical signs are completely wanting, and the functional symptoms incomplete, or else seem referrible to other lesions: the same remarks are applicable to the general symptoms, and we at the same time find, in addition to the pneumonia, some other affection which may attract the whole attention of the practitioner. When inflammation attacks, for instance, the central portion of a lung; when the expectoration is at the same time absent; when the inflammation is but slightly marked and is developed in an individual of but little excitability and already labouring under some other disease; nothing then occurs to clear up the diagnosis of the practitioner: everything, on the other hand, tends to lead him astray. But I must hasten to add, that these cases are extremely rare; almost constantly there exist some general phenomena, some functional disturbance of the respiratory apparatus, which draw attention to this part; and auscultation and percussion discover sooner or later signs which establish the diagnosis of the affection.

X. A pneumonia may remain latent in this sense, that auscultation and percussion discover the signs of inflammation in but a very small portion of the organ, as happens, for instance, in the case of central pneumonia, when the disease, advancing towards the surface of the organ, has as yet attacked but a very small portion of its costal extent, or when inflammation of the anterior edge of the lung is combined with pneumonia occupying in an especial manner the deep and middle regions of the organ. In these cases, while auscultation and percussion reveal to the practitioner but a very limited pneumonia, the other symptoms indicate, on the contrary, an inflammation of much greater extent. Under such circumstances, we should distrust the evidence of auscultation and percussion, and forming a graver diagnosis than they would seem to indicate, subject the patient to the most active treatment.

XI. *A pneumonia at first latent may afterwards become manifest.*—This happens most frequently in central pneumonia. M. Andral relates the case of a wool-carder, 49 years of age, who had for several days laboured under a cough before presenting any grave symptom, when he was admitted into *La Charité*. On the first day, this man appeared to be attacked with a simple pulmonary catarrh of some intensity. He presented but little fever. The respiration was free; the chest resounded well on percussion; on auscultation there was merely heard a mixture of mucous and sibilant râle in some of the bronchial tubes, and great intensity of the inspiratory murmur. Still the sputa presented an appearance which seemed but little to accord with the apparent benignity of the other symptoms. They were formed of a liquid resembling a thick solution of gum of a reddish brown colour, or somewhat similar to the juice of prunes, as in the third stage of pneumonia. The next day, the 7th of April, the expectoration continued, but the pulse had become greatly accelerated; there was excessive heat of skin, and a great degree of constriction in the respiration. Percussion then discovered a dull sound on a level with the right breast; a crepitant râle was also heard in this spot, weak in character, but without any mixture

of the inspiratory bruit. The existence of pneumonia was no longer doubtful. (Venesection to 12 ounces.) The blood was devoid of the buffy coat.—8th of April: Increased dyspnoea; the expectoration still resembled the juice of prunes: the dulness on percussion extended from the right breast to the clavicle of the same side, and over this surface bronchial respiration was heard together with resonance of the voice. Pulse feeble, skin cool, face yellow and sunken. (*Two blisters to the legs.*) On the 9th, there was delirium and tracheal râle; the pulse was feeble but not frequent, the extremities cold. (*Sinapisms, antimonial preparations, &c.*) Death took place a few hours afterwards. On the *autopsy*, the superior lobe of the right lung presented a mixture of red and grey hepatization; the grey predominated near the root of the organ, while the red was principally found on approaching the summit. It is very probable that at the time of the appearance of the peculiar expectoration above spoken of, the pulmonary parenchyma was attacked over a certain extent with diffuse suppuration, and that the two first stages of the inflammation had been entirely misunderstood, the root of the lung being the only part affected; afterwards, the inflammation extended to the summit of the organ, and then for the first time it could be clearly diagnosed. Central pneumonias frequently present these two periods in their progress, as proved by the observations which have been brought forward when speaking of the importance which is acquired in these cases by *supplementary* respiration. We shall also have occasion to return to this subject when treating especially of central pneumonia.

XII. *A pneumonia at first manifest may afterwards become latent.*—Thus, when pleuritic effusion supervenes in the course of a pneumonia which was at first characterized by its usual physical signs, by cough, by dyspnoea, and by fever but *without expectoration*, the effusion alone might be diagnosed, and the pneumonia escape all investigation, so that we could merely suspect its existence. But we may observe, that in these cases the various positions which are given to the patient, by displacing the liquid which we will suppose to be free in the pleuræ, unmask a certain part of the inflamed parenchyma, and thus crepitation may re-appear at this moment. I must also class in this division that lesion of the pulmonary parenchyma which succeeds to a frank and well-marked pneumonia, a lesion which one must consider as inflammatory, and which frequently is merely announced by a slight sub-crepitant râle, some little bronchial respiration, and trifling obscurity in the sonorousness of the chest, but unaccompanied by dyspnoea, cough, expectoration, pain in the side, or fever, and frequently attended by return of strength and appetite. Here we have a lesion formed usually of a very circumscribed character, which might easily escape even an attentive observer, unless he were forewarned of the possibility of its existence; still the parenchyma is but very slightly permeable, and is more or less friable and diseased; the gravity of this lesion is greatly augmented from the circumstance that any excess on the part of the patient, or a sudden chill re-excites the inflammation which was previously almost subdued, and quickly leads to the destruction of the individual.

In briefly exposing the principal circumstances which render pneumonia latent, I have at the same time indicated the means of avoiding error; I shall here merely say that, to an *attentive* and *careful* physician, pneumonia is very rarely latent. In fact, *whatever* patient he may be called to, the *attentive* physician examining carefully *every organ and individual function* of the body, will be necessarily led to employ in all cases auscultation and percussion, as well as to make a strict examination of the expectorated matter, &c. Hence he will not run the risk of being deceived by the predominance of certain general symptoms which simulate other diseases; their absence will not leave him in fatal security; he will discover the complications which alter or mask pneumonia, as well as the remains of an inflammation which has almost disappeared. The scientific physician, again, will be enabled to reap immense advantage

from percussion and auscultation, knowing what valuable resources he possesses in these two modes of exploration. He will analyze the various sonorous phenomena which are presented at the same time in the respiratory apparatus, and will be enabled to distinguish those belonging to pneumonia from such as originate in any other lesion of these organs. The delicacy of his touch combined with that of hearing, will give him the power of recognising the numerous shades of resistance, and of dullness in the inflamed lung. He will also know that a violent shivering occurring at the commencement of a disease, and followed by intense fever, must lead to a suspicion of some acute inflammation, more particularly pneumonia, especially if the constitution be characterized by a predisposition to thoracic inflammation. Under such circumstances he will in a particular manner direct his attention to the lungs, and will explore with the greatest care *all* the regions, but especially those corresponding to the summit of the armpit, and the supra-spinal fossa. He will know the value acquired in these cases by phenomena apparently insignificant, such as roughness and dryness of the inspiratory bruits, as well as their feebleness, &c.; and also the means of unmasking those pulmonary lesions which have a tendency to conceal themselves; that attempts at motion in a patient affected with pneumonia give rise to a more or less intense dyspnoea, which is entirely absent while lying down; that by causing the patient to cough or speak, we in like manner produce a difficulty in the breathing; and that pressure on the abdomen induces a similar result. In fine, the scientific practitioner will be aware of all the circumstances which render pneumonia latent, and will thence acquire a facility in forming his diagnosis.

SUBSTANCE OF A LECTURE INTRODUCTORY TO A COURSE OF COMPARATIVE ANATOMY AS ILLUSTRATIVE OF PHYSIOLOGY.

By R. HUNTER, M.D., Lecturer on Anatomy and Physiology at
Westminster Hospital Medical School. Delivered 2nd May, 1842.

GENTLEMEN.—The subject we are about to investigate is one of some extent, as well as deep philosophic interest. When we think of the endless multitudes of living beings that people the globe, some adapted by their organization for moving about in various ways upon the earth's surface, others formed for living under the ground, some inhabiting the waters, and others delighting in the regions of the atmosphere; when we think of the diversities of size in individuals of the animal creation, varying as they do from the microscopic animalcules far too minute for our unaided optics, to the huge elephant, or stupendous whale; when we think of the great varieties of form and apparent diversity of structure they exhibit, we might be led to imagine that a science that takes cognizance of the internal constitution and structure of all such beings must overpower the mind by its magnitude, and distract by the endless variety of its details. But such is not the fact. The operations of nature are accomplished by laws as simple as they are effective, and while we behold in every department of nature an infinite variety of effects, these effects can generally be traced to a few simple causes, which we denominate laws of nature. If every animal were as essentially different in its nature from every other animal, as an animal is from a vegetable, or a vegetable from a mineral, we might have reason to speak of the overwhelming nature of the subject; but amidst the variety of external character that exists in the animal creation, a similarity of structure obtains which is calculated to awaken the liveliest emotion. The philosopher is thus enabled to arrange these seemingly interminable series of existences into a few classes with their subordinate orders, genera and species, and even to trace out a unity of structural arrangement and organization in them all. We need not then feel uneasy at the seeming difficulty of the subject. It is apparently complex, but in reality simple.

To those who have already attained some knowledge of human anatomy, this department of the science will be found both easy of attainment and highly interesting; for every animal may be viewed

as a modification of the structure of man, and consequently every department of this course will bring with it a new help to the true reading of human anatomy, and will be found to throw much light on human physiology.

To those who mean to study human anatomy at some future period, a course like the present will form an agreeable and useful introduction. It will smooth the path, and prepare the way by familiarizing the student with technicalities common to both departments, and will lead the mind, by an easy gradation, from the great outlines of animal organization, to the more minute inquiries of a kindred description incidental to the study of the human structure.

Even as a department of popular science, Comparative Anatomy has claims upon public attention; for independently of its importance in reference to medicine, independently of its inherent interest, there is no science the cultivation of which tends more to eradicate prejudices from the human mind, or to lead to so many direct proofs of the existence of final purposes, and consequently of an intelligent first cause. It is the foundation, besides, on which veterinary science can alone stand, and may even be made the stupendous instrument of disclosing the structure of the globe itself, and the various revolutions to which it has been subjected since its first formation.

These are topics on which I might expatiate, but at present I shall confine myself to the importance of comparative anatomy to you as students of medicine, as scientific investigators of the animal economy.

And, 1st, of its importance in the elucidation of *human physiology*. Haller has asserted that human physiology has been more benefited and advanced by the dissection of inferior animals, than by the dissection of the human subject, and the history of physiological discovery amply verifies the fact. In all inferior animals, as well as in man, functions are performed through the instrumentality of organs, and these organs are *essentially* the same in all. All animals have organs of conservation, nutrition, and reproduction, the first enabling the animal to preserve itself amidst the objects that surround it, the second imparting the power of growth, internal change, and renovation, and the third for perpetuating the species. So far then all animals are alike, but we shall find that the organs by which these functions are executed are subject to numerous modifications, which are generally in harmony with the instinctive powers of the animal, and the relation it bears to external nature. These modifications may be viewed as so many experiments instituted by nature in the elucidation of the human organs. In some animals, organs are found in their simplest condition, in others more complicated, and in others in their most developed forms. We can thus judge what is essential in any organ, and what is merely assistant or accessory, and I need hardly say that such knowledge is calculated to throw much light upon human anatomy, as well as upon human physiology.

Again, the organs upon which the vital functions depend are hid from our view, but before the functions of these organs can be comprehended, the organs in their living state must be subjected to the scrutiny of the senses; but such a mode of procedure is impracticable and improper in the human subject. But we have no such restraints with the inferior animals. They can be subjected at all times, and under all circumstances, to the most searching investigations of the physiologist, and, in truth, how have all the great discoveries in physiology been effected, but by adopting this mode of procedure? Look at the discoveries of Harvey, Spallanzani, De Graaf, Haighton, Baer, and Wagner on the generative process—of Harvey on the circulation of the blood—of Aselli on the lacteals—of Eustachius and Pequet on the thoracic duct—of Rudbee on the lymphatics—of Bell and Magendie, in our own day, on the nervous system—and of John Hunter, Wilson Phillip, Edwards, Marshall Hall, &c., on many of the vital functions, and say whether human physiology is not dependent for its very existence as a science on comparative anatomy? These great men found the human body, as usually presented to them, a sealed book, a dead letter. It afforded them no point of sup-

port, no resting-place on the sea of conflicting opinions. They left, therefore, the inanimate human, and repaired to the animated brute creation, and by watching the operations of the different organs as exhibited in various races of living animals, they were enabled to establish satisfactory conclusions regarding the human functions, to lay the solid foundations, and erect the frame-work of human physiology.

Although comparative anatomy was at first investigated for the purpose of extending our knowledge of human anatomy and physiology, yet you ought to know that it embraces a wider sphere, and has higher capabilities. There is a general physiology, as well as a physiology of man. Comparative anatomy bears the same relation to general physiology, that human anatomy bears to human physiology. Human physiology is the science of the vital phenomena of man, while general physiology determines the laws that regulate the phenomena of all organized beings. In investigating the science of life, our first step is to ascertain the material instruments or organs through which vitality is manifested, and as life appertains not to one being, but to many, the laws of life could never be deduced from investigations into the structure and phenomena of any one animal. In the human being, the organs exist in a state generally of high development, or great complexity, so that much difficulty is experienced in distinguishing the essential from the necessary parts of any organ. But this is not all. In man a connection and reciprocal influence exist among these complex organs, which produce overwhelming difficulties, and baffle our best laid schemes to determine the precise effect and importance of each organ. But in comparative anatomy, we obtain a view of these organs in varied degrees of simplicity, and in every variety of combination. In some animals, we find an organ as complex, or even more complicated than in man; in others the organ is stripped of all its accessories, and in others again the organ is entirely withdrawn, and the effects of these varied modifications and privations displayed to our view. No human physiology can be sound which is at variance with general physiology, and general physiology cannot be perfected except by observing and comparing the functions of all animals to which any peculiar modification of structure has been imparted. In this way only can we ever hope to keep the facts of special physiology within their proper bounds, and ascend to those general laws that regulate the animal creation.

Human physiology, important though it be, can only carry you a certain length in the study of the animal economy. Indeed, you may get well acquainted with all that is known of the physiology of man, and yet remain very ignorant of the capabilities and resources of the animal system, for man is but one link in the extended chain of being; but comparative anatomy enables him to soar above the contracted doctrines of a special physiology, and from the height to which it raises him, enables him to extend his vision over the field of general physiology. Could human anatomy or physiology lead the student to a knowledge of those astonishing *instincts* that exist in animals, and which have engaged the attention of philosophers of all ages, and which involve a subject of inquiry as deep nearly as that of human reason itself?

There is a close and intimate relationship subsisting between the instincts and the structure of animals. The carnivorous animal has differently formed organs of support and progression, as well as of digestion, from those that live entirely upon vegetables. The animal whose progression is performed by leaping, is differently constructed from that whose progression is performed by walking or running. The animal that burrows underground is differently formed from that which lives on trees, or pursues its prey under the waters. The relationship which exists between the structure of animals and their instincts is so close and invariable, that many physiologists have been led to view them as holding the relationship of cause and effect. Be this as it may; whatever may be the immediate cause of the instinctive powers of an animal, it cannot be doubted that an intimate relation exists between the mode of life and the structure of the animal, and that this relationship is univer-

sal throughout the animal creation; so that the mode of life being given, the structure may be predicated, or the structure known, the mode of life may be inferred. Indeed, it must be obvious that without such a relationship an animal would be a bundle of contradictions, would be at variance with itself, and could not therefore exist. In studying, therefore, the instincts of an animal, we must get acquainted with the structure of the animal, and a knowledge of the structure will often lead us to some knowledge of the nature of the instinct.

Akin to the subject of instincts, we find in some animals instances of extraordinary exaltation of power in the organs of sensation; indeed, to such a degree as to have induced the belief in the existence of a sense different from any we enjoy. The strength of vision in the eagle and other birds of prey, and the tactile sensibility of the bat, which enables it even when deprived of sight, hearing, and smelling, to wend its way unhurt amid the toils with which it may be purposely surrounded, may be given as examples.

These are instances of great exaltation of powers that exist in a lower degree in man; but comparative anatomy unfolds to us still more extraordinary wonders in the tenacity of life, which many animals exhibit in the superior energy of certain faculties, such as the generative, and in the existence of others which do not appertain to man. As examples, I may shortly mention that many cold-blooded animals can live for days after their hearts and lungs have been extracted. That the removal of an eye, of a limb, or even of a head, will be followed by a speedy reproduction of the lost part. That many animals may be turned inside out without apparently suffering inconvenience, and not a few may be cut into numerous pieces, and the pieces live, and become isolated and perfect animals.

The hybernation of animals, or the torpid state into which some of them fall when the weather locks up their usual aliment, is another interesting fact in natural history, and involves a deep and intricate problem of physiology, but which could never be solved by the light of human physiology. I might also refer to the phosphorescent and electrical phenomena which certain insects and fishes display, and which depend unquestionably on some peculiarity of structure incidental to these animals, but regarding which no light can be elicited by investigations that appertain exclusively to man.

As students of the animal economy, comparative anatomy then has high claims upon your consideration, and to the object and method of studying the science, I shall now shortly direct your attention.

Comparative anatomy is the science that takes cognizance of the structure and organization of all animals. Under this view it would be more appropriately denominated general anatomy—a designation more frequently given, however, to the anatomy of the textures or tissues inherent in animal structures. As our object in these lectures will be to render this department of science subservient to the interests of physiology, an examination of the structure of animals individually would be in some measure out of place. Haller has stated that twenty years is insufficient for obtaining a knowledge of human anatomy; and were the many thousand species of animals to be examined by us with equal circumstantiality, we might indeed commence such a course; but who among us would see its termination? Besides, were such a plan practicable, it would be both uninteresting and inefficient as a guide through general physiology. We shall not then enter upon the special anatomy of any animal, but shall confine ourselves to the structures appertaining to groups of animals, and shall thus be enabled to place before you those points of structure in which these groups agree, and those in which they differ. We shall thus avoid the tediousness of uninteresting details, and keep constantly before you those facts which constitute a basis and substratum for general physiology.

From what you know now of the nature and object of this course, you will perceive that the whole may be said to resolve itself into two grand parts, *animal structure* and *animal function*. But as animals are numerous and diversified, we

must group and classify them, that they may be brought effectually before the mind; and as the functions dependent upon the active condition of the animal textures are various, a classification of the animal functions themselves will be found desirable and useful.

I shall not dwell at present upon the classifications of the animal kingdom that have been presented to us by zoologists and comparative anatomists. Suffice it to say, that no such arrangement is good that is not based on the structure of the animal, and that our best zoological classifications have been proposed by those who best knew the structure and most scrupulously followed it. The natural relation which exist between zoological classification and comparative anatomy was well known to the ancients, particularly to Aristotle. In his book, *Peri Zoon Historias*, a clear, a concentrated ray of light is thrown over the field of comparative anatomy, and the divisions of the animal kingdom, which he formed on the solid basis of anatomical structure, are so correct, so true to nature, that they have been substantially introduced into our most modern systems of zoology. Pliny, among the Latins, followed in the track of Aristotle, and among modern naturalists Gesner, Aldrovandus, Redi, Swammerdam, Willoughby, Ray, Linnæus, and Cuvier, are found illustrating at every step of their progress the necessary dependance of zoological classification upon anatomical structure. Cuvier, with the exception, it may be, of Aristotle, affords the most striking practical examples of the truth of this observation. "I was necessitated," says this great naturalist, in his preface to his *Régne Animal*, "I was necessitated, in furtherance of my object, to make anatomy and zoology, dissection and classification proceed hand in hand together; on my first remarks on organization, to look for the best general principles of distribution, and to employ those principles in making new observations, and these new observations in their turn to carry to perfection the general principles of distribution. In fine, to produce from the action and reaction of the two sciences such a system of zoology as might serve for an introduction and guide in anatomical research, and such a body of anatomy as might develop and explain the zoological system." I am partial, I must say, to the classification of Cuvier, to which your attention will be particularly turned, and with which you ought to be immediately and perfectly acquainted, as it is the best, as a whole, that has ever been formed, and the best of those which have been more lately produced are but modifications of it.

As the principal object of this course is physiological, zoological arrangements are to us but of secondary importance. That you may know, however, what has been accomplished in this department of the science, I shall, on an early day, direct your attention to the principles upon which the classifications of Linnæus, Lamarck, Virey, Dumeril, Malling, Carus, De Blauville, Cuvier, and Grant are founded. It would be inconsistent with our design to follow in the track of any one of them, although we shall avail ourselves of more than one of them in grouping the objects of our research. They lead no farther than the confines of the anatomy or structure; whereas, our object is more refined; it is to ascertain the function, and to observe the effect which the modification of structure produces upon the function. The organs of which all animals are composed may be physiologically arranged into three great classes:—

- 1st. Those concerned in relative life.
- 2nd. Those concerned in nutritive or organic life.
- 3rd. Those concerned in reproductive life.

The first includes the organs of motion and sensation, or those organs by which the animal can move the different parts of the body, or transport itself from place to place, and appreciate the properties of the objects that surround it.

The second or nutritive apparatus consists of organs on which the organic actions of the animal depend, those by which the animal grows to maturity, and is maintained in a state of vitality. The organs which contribute to these important ends are those of digestion, absorption, circulation, respiration, and secretion.

The third or reproductive organs are those by which the new animal is formed and fitted for an independent existence. These three classes of functions exist in all animals, and the organs through which these functions are executed, however modified they may be, are of necessity found in all.

An animal then is, essentially, a being endowed with sensation and motion, and possessed of assimilating and reproductive powers. The assimilating and reproductive powers are common to vegetables and animals, and sensitive and motive powers peculiar to the animal tribes.

According to Linnæus, minerals grow, vegetables grow and live, and animals grow, live, and feel. But although we may accord a certain degree of correctness to this observation, it must be borne in mind that the growth here referred to is not a similar process in all. The growth of a mineral is effected by an aggregation of similar particles or molecules, whereas vegetables and animals grow by a species of intussusception, and by a power they possess of assimilating the particles thus introduced. There is thus a broad line of demarcation between the unorganized and organized kingdoms of nature; a difference of internal constitution as great, if not greater than the more palpable difference of external forms; for as a distinguishing character, it may be also stated, that all minerals have their surfaces bounded by straight lines, which imparts that angularity so conspicuous in the well-formed crystal. Whereas a rotundity appertains to vegetables and animals. The seeds of plants, the eggs and young of animals, are remarkable for their roundness of form, and this rotundity applies to the plant and animal as a whole, as well as to every part of which the organised being is composed.

The line of distinction is boldly drawn between the organised and unorganised kingdoms of nature, but not so between the two grand divisions of the organised world, the vegetable and animal. These two kingdoms shade so much into each other, that it is difficult to say where the one terminates and the other commences. There is no external distinguishing character that can be depended upon, none but the existence or non-existence of sensation. The being possessed of this endowment, though formed like a plant, though fixed to a rock and branching like a tree, is undoubtedly an animal; if it wants this endowment it cannot be an animal. All sensation depends upon the existence of nervous matter, or a nervous system, and the development of this system bears an intimate and necessary relationship with the other animal endowments of the being. If this system is in a low state of development, the muscular system must be equally low, for the contractile condition of every muscular fibre is dependent on a nerve, and nervous matter constitutes the essential part of every organ of sensation. An organ of sensation without a nervous system is a contradiction, a kind of animal impossibility. The nervous system is, then, the first and most important part of an animal body, from which all the other parts derive their capacities for action, their value, and to which they are, as it were, spell-bound.

Although Lamarck founded his classification of animals upon the nervous system, he has given precedence to the digestive organs, in enumerating the organs and systems of organs, according to their relative importance. The following is his arrangement:—

1. The organs of digestion.
2. The organs of respiration.
3. The organs of movement.
4. The organs of production.
5. The organs of sensation.
6. The organs of circulation.

This arrangement is founded upon no just principle of relation between these organs themselves, nor upon the relative value of these organs in the animal system. The arrangement may possibly vindicate the comparative frequency in which the organs are employed in nature, but frequency of employment and functional pre-eminence are two very different ideas. The most simple of animals, the infusory, are the most numerous; but it does not follow that the most circumscribed functions of these beings are the most essential or fundamental, and far less the most important of all the animal

functions. An animal may appear to be merely a digesting bag, but if that bag has a power even in a minor degree of selecting its aliment (which all animals must be supposed to have), then it possesses a power which must exist antecedently to digestion, and on which the animality of the being depends. The nervous system, whether in a simple or more complete form, is the primary and essential entity of an animal body, and to which all the other structures of the animal bear but a secondary relationship.

Some of these organs are more nearly related to the nervous system than others, such as the sensitive and motive, both of which are attached to the periphery of this system, the former to transmit impressions inwards from surrounding objects, and thus to link the animal more closely to surrounding nature, and the latter or muscular to fit the animal to obey, or carry into effect the voluntary impulses transmitted outwards, for the varied purposes of animal existence and enjoyment.

These are all the organs that *exclusively* belong to animal existence, for the organs of nutrition and assimilation, though constituting a very large proportion of every animal body, may be viewed as subsidiary to the power adapted for imparting to them their peculiar structures, and maintaining in these structures vitality and health: while the organs of re-production may be viewed as still more insulated, as forming an appendage to the animal not required even for the exigencies of the individual, but for the existence of the species.

In tracing the relationship that exists among animal bodies and their organs, we might either make the structure of man the starting point, and descend through the links of the animated chain of being to the simplest of animals, or we might adopt the opposite plan, by commencing at the simplest, and tracing the organs through their gradually increasing complexity, till they attain the full measure of development, as found in the human organs. This last mode appears to me to possess advantages over the other. It leads by the more natural process, from what is simple to what is more complex; it leads us from the essential and fundamental part of all the organs to their varied appendages and accessories. It shows us how the more complicated organs are built up, and it affords a key to the explication of those changes of form which the human organs undergo during the period of development.

Such, then, are some of the advantages which the student of physiology may derive from the cultivation of comparative anatomy, and such the plan we intend to pursue, in placing the outlines and principles of this science under your observation. While we shall freely avail ourselves of the labours of those distinguished men, who have devoted much of their time to the cultivation of this field of scientific research, we shall also as often as we can repair to the book of nature itself, and shall always be inclined to prefer the revelations of that book to the commentaries, however scientific, of the most gifted of men.

MEETINGS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY. March 22, 1842. The President in the Chair.—*Notice of Cases of Plague contracted in the Lazaretto of Constantinople, in a Letter addressed to John Davy, M.D., F.R.S., Inspector-General of Military Hospitals*, by Mons. Pezzoni, Conseiller d'Etat à S. M. l'Empereur de toutes les Russes, attaché à la Legation Imperiale près la S. Porte, in proof of the contagion of Plague; with Remarks by the former.—(Communicated by Dr. Hodgkin.)

Dr. Davy observes, that the long-agitated and very important question, whether the plague is truly a contagious disease, or merely an epidemic, is not decided, appears clearly from two of the latest works published on this subject, viz., those of Clot Bey and Mons. Boulard. By the former an attempt is made to prove that the oriental plague is not contagious; whilst by the latter the contrary is main-

tained. This difference of opinion is the more remarkable, as their researches were conducted chiefly in the same country, Egypt, and about the same time, and in part in conjunction, both of them having belonged to a commission, which for a considerable time devoted themselves to the investigation of the malady within the walls of a plague hospital. Dr. Davy remarks, that it is very desirable this question should be brought to an end; for, whilst it is undecided, there is little probability of anything of moment being attempted in regard to the quarantine laws, which stand in so much need of being revised and reformed.

Dr. Davy states, that he left England in November last, employed by her Majesty's government on particular service, with instructions from the Foreign Secretary to make especial inquiries on the subject in question, in connection with the quarantine system. His mind, he says, was in a state of doubt on the point at issue, but if he had a bias, it was rather in favour of the non-contagiousness. At Constantinople he found all the medical men of any experience decided contagionists, but his own opinion remained the same till the month of June, when some facts came to his knowledge which appeared to be demonstrative that plague is really contagious. These facts were briefly the following:—At a time when Constantinople and its neighbourhood were free from plague, and had been so for three years, a vessel arrived from Egypt with cases of the disease on board, which, with the whole of the crew and passengers, their effects and merchandise, were disembarked, and placed in quarantine in the Lazaretto. Of the guardians and porters employed on this service, two contracted the disease, one of whom died. They belonged to a population of 800,000 souls, free from even the suspicion of plague, and had been so for three years, and which remained free up to the time of Dr. D.'s departure, the latter end of September, unless an exception be made in the case of a monk just liberated from the Lazaretto, and who, it cannot be doubted, contracted the disease whilst confined there. These two cases, with a notice of the monk and the son and daughter of the surveyor of the Lazaretto, are the subjects of the letter addressed by M. Pezzoni to Dr. Davy. The author is a gentleman long resident in Constantinople, a member of the Superior Council of Health, and who for many years has specially directed his attention to the question of the contagion of plague.

M. Pezzoni details very fully all the particulars connected with these cases; and there is appended to the letter a table of the patients admitted into the hospital of the Lazaretto from the 8th June to the 15th August, as also a declaration on the part of M. le Dr. Robert, the director-general of quarantine, as to the existence of the disease. Our limits will not allow us to enter into these interesting details, but we may state that Dr. Davy expresses his desire that the facts brought forward by M. Pezzoni should have the same weight with others as they have had with himself; and he held conclusive that plague *can* be propagated by contagion in persons in good health, and in a place and atmosphere in a healthy state. Dr. Davy adds, that about the same time that the proofs of the contagious nature of plague were afforded in the Lazaretto of Constantinople, a similar case occurred in the Lazaretto at Malta; the facts relative to which have been recorded by Dr. Gravagna, the principal health officer. Dr. Gravagna reasons much in the same manner as M. Pezzoni against the non-contagionists, considering the occurrence of plague in a Maltese who communicated with plague patients in a ship from Alexandria (that city being then infected with plague,) as proof demonstra-

tive that the disease can be propagated by contact.

"If," adds Davy, "this be admitted to be proved, an important step surely has been made in the inquiry, which, followed up with caution, may ultimately bring the investigation to a satisfactory end, so that our knowledge of plague may be on a similar footing to that of variola, or any other disease which can be mentioned, that has been carefully and dispassionately studied."*

Mr. Davis expressed his most positive opinion that the plague was not a contagious disease. He had spent whole days in company with those suffering under the disease; he had felt his patients' pulses, and continually attended on them every four hours; he had even for four or five successive nights slept close between two persons dying of the plague, yet he had never been affected by it. If the disease were contagious, how was it, he would ask, that there was a regular season for it—that it always commenced its ravages about December, continued till the middle of June, and then ceased? It was not true that plague was ever conveyed in ships or by merchandise. It always began in the interior; there it would often for many months, so long as the wind blew from the coast, continue its ravages without spreading; and then, with a change of wind, would make its way to the coast, and people would suppose it had been brought there by the ships. Numberless circumstances favoured its occurrence, altogether independently of contagion: fear, for instance. He remembered two young men while he was in Egypt, who came to him in great anxiety, because they had been appointed to medical service in the Plague Hospital, where they said if they once entered they were certain they should die. He obtained other service for them; yet they both died of plague, though they had never been near the hospital. He would say a word of the treatment. At the time when he was in the habit of seeing the disease many different plans were employed. Some bled all their patients largely; but he believed that nearly all who lost much blood lost their lives also. Excluding such irrational modes of treatment as this, the deaths were, on the average, about one-half, whatever method was adopted; whether bark or tartar emetic, or opium or ether, or mercury, or any other. Near the end of his service a case occurred which he thought threw some light both on the nature of the disease and the right mode of treating it. At a great dinner given to their mess, he observed a servant, as he was handing some wine, stagger, and suddenly become exceedingly pale and dirty-complexioned. He had him at once removed, but he rapidly died of plague. It seemed to prove that one of the chief circumstances in the disease was the retreat of blood from the skin, and the want of a sufficient *vis a tergo* for the blood. From this time, therefore, he took care that a warm bath should be at all times ready in his regiment's quarters; and the instant a man was seized with signs of plague, he was put in it, and kept there—wine, ether, or some other stimulant, being at the same time administered—till perspiration came on. By these means he never after lost a patient; but he was bound to say he did not begin to use them till the disease was on the decline. He would also mention, that if there was sufficient strength in the system, or sufficient *vis a tergo* for suppuration to take place in the buboes, the patients never died. Their recovery was equally sure when their system could be affected, though but slightly, with mercury.

Dr. James Johnson reconciled the statements of the advocates for and against contagion, by

* The above is the abstract of the case as prepared by the Secretary.

supposing that they had seen the plague under different circumstances. One might see it in those places where it had arisen, and was maintained, by peculiar epidemic conditions; another where it had been conveyed from the place of its origin, and was propagated by contagion. It was not strange that a disease should commence in one method, and be propagated by another; that having originated as an epidemic, it should be propagated by contagion. Syphilis was an example.

Dr. Addison said that the arguments adduced against the contagiousness of plague might equally be applied to any other of the analogous diseases which were universally admitted to be contagious.

Mr. Hawkins said, that when he was a lecturer on anatomy, six of his pupils residing in different parts of London were at one time seized with small-pox, yet none of them had any idea where he had been exposed to the contagion. The fact was, a body of a person who had died of small-pox had been brought for dissection, and he had had it put in a room through which these among other pupils had occasion to pass. None of them, however, knew of the body being there, and two of them had only once passed through the room in which it lay. One of them in passing through felt a distinct rigor, and became ill almost directly afterwards; but had it not been that he was himself acquainted with the common source of the contagion which afflicted them all, all these persons would certainly have referred their disease to some wrong cause.

Dr. Truman and Dr. Gregory spoke in favour of the maintenance of the quarantine laws.

Dr. Webster, Mr. Arnott, and Dr. Wetherhead, spoke briefly in favour of the doctrine of non-contagion, and of the propriety of abrogating the quarantine laws, their chief argument being that a truly contagious disease could not have remained so long limited to a particular region.

ROYAL MEDICO-BOTANICAL SOCIETY. April 27, H. Gibbs, Esq., in the chair.—Dr. Sigmond delivered a lecture on arsenic, in commencing which he stated, that as many of the members of the society were not medical men, he should enter more in detail than would otherwise be required. He should divide the question into the three great leading features—1st., of the symptoms caused by the ingestion of arsenic; 2nd., of the observations made on the dead body; and 3rd., the tests by which the presence of the poison can be recognised, and the toxic agent reproduced.

Arsenic does not act on the system, unless it be combined with oxygen; of this combination there are three different degrees; the first, or fly-powder, as it is called, consists of one proportion of oxygen, and one of metallic arsenic. If arsenic be exposed to the air for any length of time, a film forms on its surface, constituting the fly-powder, the lowest form of oxydation to which arsenic is subject. If the metal be exposed to heat, it will combine with two proportions of oxygen, forming arsenious acid, the white arsenic of commerce, or arsenic acid, as it is called on the continent. The third combination consists of three of oxygen, and one of the metal; it is called arseniate acid. Of these three, the white arsenic of commerce, the ratsbane, is the poison to which the attention of the society was directed by the lecturer. The first question requiring notice, was what was the smallest quantity of arsenic which could by possibility prove fatal? It appears that cases are on record in which two grains have proved fatal, but the usual amount under ordinary circumstances would be four grains. As much as thirty grains have been taken, and yet recovery follow; but then

the poison was administered on a full stomach, and the organ was relieved by vomiting before the poison could get into the circulation. Half a grain could in general so disturb the alimentary canal, as to produce the toxic effects of gastro-enteric dysentery, although the dose might not be sufficient to cause death.

The next question that arises is, how soon after the exhibition of the poison will symptoms thereof show themselves? In rare instances, the effects of arsenic have appeared within ten minutes, but the average duration of time is about two hours. Sometimes seven or eight hours have elapsed, and persons have even taken the poison at bed-time, have slept through the night, and the symptoms have not occurred until the succeeding morning.

Then, again, comes the question, is the individual at the time of ingestion, aware of the fact? Is arsenic insipid? If any one were to take a solution of corrosive sublimate, he would instantly become aware of it, because that salt would cause constriction of the gullet, and a frightful metallic taste in the mouth. When Dr. Sigmond wrote the article on arsenic, which appeared in the Encyclopædia of Surgery a few years back, he then stated that arsenic had an acrid taste in the mouth; this opinion, formed from the statements of authors, the evidence given at public trials, and more especially from the celebrated case of Mr. Blandy, he had been led to change, from later experience; he had seen individuals who had taken arsenic unawares, and they had stated that in solution it tasted like water. In this view of the case he was supported by Dr. Christison, and he had come to the conclusion that arsenic did not produce any effect on the mouth and fauces; he had therefore corrected his views, as might be seen in his lectures published in the *Lancet*. This was a matter of great importance in the celebrated case of Madame Laffarge, to which he stated he intended to allude more particularly on a future occasion, as the evidence on that trial had been placed before him for his consideration. It will be remembered that Laffarge had cakes sent to him at Paris, which did not produce any peculiar effect on the mouth and fauces, but caused a gastro-enteric inflammation. When he had returned to his country-house also, there were three several attempts at poisoning, but he did not complain of the flavour of the articles given him until his suspicions had been excited by his relatives.

Attempts have been made to classify the symptoms caused by arsenic. Hahnemann, whose work is a text-book throughout the continent, divided them into three classes, according to the toxic effects of the dose, to wit, the first, when death was caused within twenty-four hours; second, when life was protracted beyond the twenty-fourth hour; and third, when the symptoms were acute, and yet recovery took place. This classification is not so good as that which would be formed on a perusal of the opinions and facts stated by Dr. Christison and Sir B. Brodie. The former has three stages; the first, in which the poison acts on the stomach; the second, in which it acts on the intestines; and the third, in which the whole system is more or less affected. Dr. Sigmond said, that his own opinion was, that inflammation was not a necessary consequence of the ingestion of arsenic. He believed its great action was on the nervous system, and in this he was confirmed by the experiments of Brodie, and by the reasoning of Orfila. It was much to be regretted that the latter had not produced a chain of evidence in support of his argument. The experiments of Brodie were of great importance; in his first, he applied seven grains of the oxyde of arsenic to a wound in the back of a rabbit; in a few minutes the

animal became languid; the respiration small and frequent; the pulse frequent and weak; the hind legs afterwards became paralyzed, and the animal was dead in fifty-three minutes. On dissection, the inner coat of the stomach was found to be inflamed. In the second experiment, two drachms of arsenic, dissolved in water, were administered; in three minutes the animal vomited; the pulse became less frequent, and intermitted; the hind legs were paralyzed; convulsions followed; and death ensued in fifty minutes. Dissection showed the inner membrane of the stomach inflamed. The first symptoms here presented, evidently indicate an affection of the nervous system, as evinced by the langour and affection of the respiratory and circulating organs, paralysis, and convulsions. The alimentary canal was in every instance very slightly inflamed. From these and many other experiments, Brodie concluded affection of the heart and nerves to be the cause of death. Orfila says, inflammation of the stomach is the rarest of all possible symptoms, and occurs only secondarily. The veins of the stomach take up the arsenic, and carry it to the brain and nervous apparatus, the poison secondarily causing gastritis. This may appear strange, but it is borne out by facts. When death has taken place from the injection of arsenic into the rectum, inflammation of the stomach is one of the effects produced; and the same effects resulted in the celebrated Copenhagen case, where a female was murdered by the introduction of arsenic into the vagina, although the latter organ was not affected. The experiments on mares, instituted by the Academy of Sciences at Copenhagen, fully proved this position, and showed that arsenic introduced into the vagina, would cause the train of nervous symptoms, and subsequently inflammation of the stomach.

Dr. Sigmond then proceeded to give an outline of the symptoms.

The question arises, after death has taken place, whether the process of putrefaction is retarded or advanced by arsenic. Cases sometimes occur, as in that of Laffarge, and one not quite so recent at Bristol, in which it is necessary for the purposes of justice to disinter the dead, in order to ascertain the presence of the metal by chemical analysis.

Arsenic has been found in the bones of human beings at the present day, while in those which have been dug out of tumuli, &c., no such indications have been discovered. This singular difference has been attributed by some to a peculiar development, which means nothing at all; and by others, with more apparent reason, to the use of bronzed metal by our ancestors for culinary purposes; while we universally employ iron, and the protoxides of iron are almost all adulterated with arsenic, of which consequently large quantities are swallowed every year.

Dr. Jäger, of Stuttgart, from the results of a series of experiments performed by him, is of opinion that poisoning by arsenic neither retards nor advances putrefaction. Appearances, however, differ; in a case where a large quantity of arsenic had been taken, the body was not opened until the 18th day, and there were not any appearances of putrefaction then. Some bodies have been found swollen and livid after death. A singular proof of the non-poisoning by this metal was admitted in a court of justice in Germany; on examination of the body, the medical men found living worms therein, and this they adduced as a reason for believing that poison had not been exhibited, as the worms would have been killed by it.

The stomach and intestines generally present marks of more or less inflammation, but this is not always the case, and the villous coat is

often much softened and easily separable. The natural state of the stomach is but little known, and it requires more care and attention in its examination than is generally given. Sometimes there are patches of a dusky red colour, which are supposed to be inflammation, whereas they are merely indicative of venous congestion. Peculiar streaks of a brighter hue mark inflammation. People talk of ulceration and sloughing as caused by arsenic, but Brodie (Philosophical Transactions) says that ulceration takes place only when death has occurred very late, and then even perforation of the coats of the stomach may follow. A layer of coagulated blood has been mistaken for a slough. There was a preparation of this kind in the Museum of the Royal College of Surgeons, which was exhibited to the pupils as a slough of the stomach. In cases of forensic medicine, it is requisite to ascertain what medicines have been exhibited previous to death. A gentleman, who had long been ailing, sent to a pharmacien for a dose of aperient medicine, soon after taking which he died. The pharmacien was accused of having poisoned him, by sending the wrong medicine by mistake. An examination of the body was made, and the esophagus and stomach were found to be red and livid in certain places as if gangrenous. This was considered good evidence of poisoning; but it appeared that this gentleman was in the habit of taking a strong infusion of the red poppy to compose him to sleep; and from experiments made on a dog, it appeared that this infusion would produce exactly the appearance in question.

The rectum has been generally found more injured than any other part of the intestines; it has been found ulcerated and abraded, when other parts of the alimentary canal are comparatively intact; and this is supposed to depend on that portion of the arsenic which has not been taken up into the system, being detained in the folds of the mucous membrane of the bowel until an evacuation takes place. Mortification of the pudenda is not an unfrequent effect; the penis is livid and swollen, and the scrotum resembles the appearances presented by the chimney-sweeps' cancer. A similar complaint is very prevalent among the miners in Cornwall, the ores containing a considerable quantity of arsenic. There is very little observable in the state of the lungs or brain. When effusion takes place within the chest after the ingestion of arsenic, it is essentially different from that caused by opium. The effusion following a poisonous dose of opium, hyoscyamus, conium, stramonium, &c., takes place into the parenchymatous tissue of the lungs, and is of that character denominated apoplexy of the lungs; but when the irritant poisons have been taken, the effusion takes place into the cavity of the chest, a species of sanguineous exudation. This is a matter of great importance, as it constitutes a diagnostic sign between the narcotic and irritant poisons.

Dr. Sigmond had not seen a single case of poisoning by opium in which the sanguineous congestion of the lungs did not obtain.

In the next lecture, to be delivered on the 11th of May, Dr. Sigmond proposed to continue the subject, to show the galvanic test for arsenic, and to examine the medical and chemical evidence in the case of Laffargue.

FRENCH ACADEMY OF SCIENCES.—On the employment of iron in Marsh's apparatus, and on the hydroguret of iron; new metallic combination with hydrogen. By Prof. Dupasquier.—In the most recent publications treating of the discovery of arsenic by Marsh's apparatus, we find it said "That we may employ zinc or iron for the purpose of disengaging hydrogen, provided we are assured, by a previ-

ous trial, that these metals do not give rise to arsenical stains." The employment of zinc has always prevailed, though the motives of this preference have never been explained. But is this latitude of employing zinc or iron founded on just reasons? Might not inconvenience and even error arise from the substitution of iron for zinc? These questions I will endeavour to answer, by laying before you the following conclusions at which I have arrived from experiments performed on this subject:—1st. When we cause the disengagement of hydrogen by the action of sulphuric or hydrochloric acid on iron (small nails, iron filings, &c.) this gas gives a metallic and alliaceous odour; it burns with a flame yellow at the circumference and green in the centre, and it gives stains of a red or rusty colour, frequently with brilliant metallic rays during the time that the acid continues to act upon the metal. These stains are generally rather more readily obtained by means of hydrochloric than by sulphuric acid. 2nd. The stains furnished by iron are not simply, as M. Liebig thinks, the result of the decomposition by the hydrogen of the particles of the ferruginous salt mechanically carried along in the gaseous current, for they were produced in equal abundance, and the gas, which was still fetid, continued to burn with a green and yellow flame, after it had passed through four flasks of a solution of potass, and had traversed a tube filled with amianthus, and also after ascertaining, by various means, that it did not contain the least trace of sulphate or chloride of iron. 3rd. The stains furnished by iron are produced by the combustion of hydroguret of iron and of phosphuretted hydrogen, which are found mixed with the pure hydrogen, and which remain unacted upon by potass, while this alkali perfectly decomposes sulphuretted hydrogen, when formed, and any traces of the salts of iron which might be contained in the gas; by passing, for some time, a stream of gas which has been acted on by a solution of potass through concentrated nitric acid, we shall find in this liquid a little iron and phosphoric acid. 4th. The formation of hydroguret of iron is shown in various ways:—thus, the gas after being subjected to potass produces no action on the various reagents of iron, although applied for several hours; again, these stains, on being dissolved by nitric acid, or by the mere contact of chlorine gas which causes them to disappear instantaneously, leave a dry residue which is turned blue by ferro-cyanate of potass, and brown by the hydrosulphate of ammonia; we also find iron, but as may be supposed in a very small quantity, in the solutions of metallic salts which are decomposed by hydroguret of iron and phosphuretted hydrogen, as well as in those of chlorine, bromine, and iodine, which, likewise, have the power of decomposing these gases. 5th. Hydroguret of iron and phosphuretted hydrogen, being mixed with the hydrogen disengaged from iron, act on the metallic solutions, and those of chlorine, bromine, and iodine, as the combinations of hydrogen with arsenic and antimony; thus, for instance, they decompose nitrate of silver, chloride of gold, and the mercurial salts, by precipitating the silver, the gold, and the mercury, in the metallic state; they, in like manner, convert the chlorine, the bromine, and the iodine, into hydracids. 6th. Bichloride of mercury completely decomposes hydroguret of iron and phosphuretted hydrogen, forming a white or yellowish white precipitate. The gas, when passed through a solution of this salt, becomes devoid of odour, burns with a slight and scarcely yellowish flame, exercises no action upon nitrate of silver or chloride of gold, and produces no stains; this is pure hydrogen. On removing this solution for an instant, we find the gas reassume its original

characters, and again lose them as soon as passed through the fluid. The solution of bichloride of mercury constitutes then a very simple means of obtaining pure hydrogen; that procured from zinc is never perfectly pure; but it may be purified by the same means. The nitrates of silver and of mercury exercise a similar action to that of the bichloride of this metal. 7th. By employing steel-filings instead of iron, the results are rather different; the gas burns with a yellow flame without any shade of green; it produces stains less readily, and which have much more of the metallic appearance of iron. The odour of the gas is, also, more empyreumatic than metallic, and not at all alliaceous. A well-marked empyreumatic character remains, in spite of the action of a solution of chloride of silver or mercury. The gas evidently owes these characters to the formation of a carburet of hydrogen. 8th. As we, therefore, have a constant formation of hydroguret of iron, by acting on this metal, by hydrochloric or sulphuric acid, it is evident that iron should never be employed in Marsh's apparatus. 9. This exclusion of iron is also necessitated by the fact, that the stains arising from this metal give, after their solution by nitric acid, a reaction which inexperienced chemists might confound with the product obtained by dissolving the arsenical stains in nitric acid, and then treating by the ammoniaco-nitrate of silver. 10th and lastly, it is of the greatest importance to banish iron entirely from Marsh's apparatus, for the reason that this metal is almost a preventive to the formation of hydroguret of arsenic and hydroguret of antimony. In fact, on employing arseniated sulphuric acid, or on adding a few drops of a solution of arsenious acid, (a quantity which gives strong stains, or a ring of arsenic when employing zinc,) we obtain only rusty-coloured spots and no arsenical ring. On making the same experiment, and adding 5, 6, 8, and even 10 grains of arsenious acid dissolved in water, I obtained for two or three minutes some stains of a slight arsenical appearance; but after the first moment of reaction the gas furnished merely stains of iron and phosphorus, and gave no trace of the arsenical ring. Notwithstanding, the contact of the strongly heated tube with the flame of a spirit-lamp, the gas burned at its extremity with its ordinary characters. The addition of a salt of antimony in the apparatus with the iron produces similar results.

ROYAL COLLEGE OF SURGEONS, LONDON.

List of Gentlemen admitted members on Friday, April 22, 1842:—

John Campling, John Price Kelly, James Lambe, Hayes Kyd, George Gale Snelling Coward, Russell Augustus Lafargue, James William Beresford, Henry Harris, Richard Glossen Vivian, Joseph Suthill Glover, Thomas Morris.

Admitted Monday, April 25:—

William Henry Williams, Henry William Somerset, Richard Sissons, Robert Gillman Lord, Thomas Loy, John Wellis, William Proctor, Joseph Bainbridge Fife, James Pestell.

Admitted Friday, April 29:—

Francis Robert Trumper, Charles Wakefield Jenner, Charles George Mott, James Croft, William Mills Dowding, Richard Willis, Evan Evans, Thomas Frederick Wolrige, Charles Thomas Wills, Edwin Hearn, George Everest.

Admitted Monday, May 2:—

Samuel Mallby, Edmund Cockey, Charles Pooley, Frederick William Johnson, Henry Young Chapman, William Martindale, Robert Wilson, Leonard Buckell, Charles Richard Jones.

TO CORRESPONDENTS.

Empirical List.—We regret to say that our correspondents who have furnished us anonymously with information, have not come forward with their names. What are we to imply from this? Either they take no real interest in the matter, or their information was given with a view to mislead us. That the latter is the truth in some cases we are certified of. Thus a correspondent from Bishop Stortford begs us to include Mr. Stephen Hawkes, of Clavering, in the list of quacks: and another writer from Newcastle gives us for the same list the name of Henry Harvey, of that town. On referring to the list published by the College of Surgeons, we find that both these gentlemen so pointed out are members of the college. The motive of the trick is evident, viz.—to throw discredit on our list of the unqualified, by mixing with it the names of regular professional men. The number of anonymous letters, with information, is at least one-third of the whole; and after considering attentively the whole matter, we have decided on allowing our list to lie by to a more favourable opportunity; resolved, however, if fresh authentications come in to publish it on the 2nd of July. We cannot but express our regret and surprise that the medical associations have not more generally come forward to promote an object so much within the scope of their duties.

G.—A Louvain degree is worth nothing. In truth, we treat all foreign degrees as at least nothing better than a British degree is considered on the continent. Both Flemish and German degrees may be purchased for a few pounds.

—Our correspondent from Handley will have his interest most considered by the suppression of this case.

A. B.—Our poor friend must extend his washings over the whole body. If he find this insufficient, he will do well to consult a respectable practitioner. Such exudations should not be suddenly stopped.

The Index for Vol. 5 may be had from any bookseller or newsman gratis.

Z. Y.—It is now too late. Professor Owen delivered his excellent lecture on Wednesday evening: another time he had better apply to Mr. Balfour, the Secretary.

Mr. Ward and several others.—We are paid in advance usually by post-office order, the expense of which our subscribers are at liberty to deduct. The price is now 10s. 10d. the half-year.

Messrs. Marden, Scott, Barnsfield, and Smith are thanked. Their contributions will be shortened, or published whole.

Dr. Corder, Mr. Birdington, Mr. Nottingham, Mr. Key received.

THE MEDICAL TIMES.

SATURDAY, MAY 7, 1842.

O mihi post nullos memorandi sodales!

OUR readers remember probably our mention of the trial of Roberts, a Cheltenham Druggist, who was detected visiting patients. The case against him was of so clear a character, that his counsel, Mr. Alexander, thought it necessary to withdraw any attempt at defence, a course, we need hardly say, not recommended except in the most desperate circumstances. The Pharmaceutical Journal for May, referring to the trial in a note to correspondents, thus speaks of it:—

“Thos. Kent. (Apothecaries Company v. Roberts). The result of this trial proves nothing as regards the established privileges of Chemists and Druggists. The defendant was prosecuted by a public body, who, reckless of expense, retained three eminent counsel to conduct the

cause. Even supposing his case to have been a doubtful one, he would have required a long purse to meet his opponents with equal legal strength; but it appears that his case was indefensible, and, therefore, he acted wisely in submitting to the law. With respect to the interpretation of the Druggists' Clause in the Apothecaries' Act, we may observe as a truism, that a good lawyer invariably gives his client the benefit of the best interpretation which his logic or ingenuity can devise, of any clause or form of words on which the point in dispute hinges. In the instance alluded to, the three counsel ingeniously dwelt upon one part of the clause which best suited their purpose, and drew an inference at variance with the intention of the Act. No opposition being offered, they may be said to have had it all their own way, and the Editors of some Medical Periodicals exult in what they consider a triumph over Chemists and Druggists in general; they are welcome to indulge in so pleasing an illusion. Mr. Roberts is not a member of the PHARMACEUTICAL SOCIETY, nor did he apply for advice or aid from that source.”

We are certainly astonished to see a paragraph of this kind from the pen of the able editor. There is an ambiguity, a crookedness of expression in it, far more akin to the subject matter, than (we would fain hope) to the well-meaning mind of Mr. Bell. “The established privileges of Druggists!” We confess ourselves perfectly unable to comprehend this phrase. We have no notion of what is a Druggist's privilege. Johnson defines the word to mean a peculiar right; now, we have not learned what right there is that is peculiar to Druggists. In truth, the great matter for complaint—and we share in making it—is, that the Druggists have no privileges. They can do nothing which the nearest blacksmith, or grocer, or horse-doctor may not do. If the word mean anything at all in Mr. Bell's mouth, it must mean the privilege of prescribing over the counter, or visiting the sick. The dilemma is clear. The editor of the Pharmaceutical Journal has been amusing his readers with some inflated nonsense, or he insists that Druggists shall perform the duty of medical men.

We can pass by a few vague generalities penned for his readers' pleasure, but we cannot but reprobate any notion which may even indirectly countenance a Druggist's deserting the care of pharmacy for duties wholly alien to his calling. Pharmacy is in want of all the attention which our Druggists can give it. Superior to most countries in all the attributes of advancing civilization, we are obliged to avow, with shame, that British Pharmaceutists have placed science under less obligations than the Pharmaceutists of any other portion of Europe. The ignorance of our Druggists, though nothing surprising, when we consider that nothing but money is necessary to justify their opening shop, is truly astounding, when considered in reference to an enlightened community which makes pretension to be governed by just rules of order and carefulness of that public health which it should be the first duty of a government to protect. One of the great

wants of our country, indeed, is a learned body of men strictly confined to the study and practice of pharmacy. The first view of the world of medicine naturally suggests the propriety of a class wholly devoted to the study of the chemical properties and preparation of our remedial agents. If ever division of labour promise to be advantageous, it must be surely in matters which have reference to the phenomena of life, the complicated varieties of disease, and the application and preparation of suitable remedies. There are already sufficient men to pay attention to the diseased conditions to which humanity is subject; what are wanted, are persons who will give themselves to study the properties of the substances which are used with a curative purpose. Considered socially, the creation of the Pharmaceutists into the elevated position of a profession, would be no mean achievement. The more classes of citizens who can obtain their livelihood by a professional employment, the better for civic order, and the better for individual happiness. It is the supremacy of mind over animal matter, and the more such victories a society enjoys, the greater is its advance in the scale of enlightenment. The members of the bar, however, divided into higher and lower classes of practitioners, have their solicitors; the medical profession, with all its subdivisions, should nevertheless agree in one point—in having a subordinate class confined to its own special duties—the Pharmaceutists.

This is a question pre-eminently worthy of the attention of the profession. There can be no time so proper to attend to it as the present, for we are now arrived at a point when this class settlement must take place—when the important question must be definitively decided, whether the Chemists and Druggists shall be gradually inducted into the places of our Medical Practitioners, or shall form what a wise policy teaches they should form, a distinct and separate body devoted to the study and improvement of pure pharmacy. The wish of the Druggists is plainly the former; and the history of the various ranks of our profession lends a formidable aspect to their pretensions. We know how travelled quacks, or alchymists, became a chartered body of physicians—how a society of barbers grew into an incorporated college of surgeons—how compounders of drugs turned into a compact body of general practitioners. This upheaving movement of society seems one of its essential laws, a natural tendency of the social state; but in these instances the tendency and the wants of society mutually corresponded. The wants have now been supplied, but the tendency remains, and unless we bank the tide, there can be little doubt that the same law which threw up the present layers, will submerge them beneath others upheaved out of the same bosom.

If the profession be wise, it will take

to account this progressive line of society, and interpose barriers to what cannot in reason be considered other than a most mischievous advance. No ordinary vigilance or energy will do. We must recollect that the Druggists are united in thousands—well organized, well disciplined, facile of movement, ready to take advantage of any circumstance in their favour—to resist any movement to their prejudice—in short, they have all that magic influence which must ever be possessed in England by so large a phalanx of united citizens with large pecuniary means at their command. If we would successfully combat such a body's pretensions, we must be combined ourselves. We trust this important lesson will be pondered on and turned to account.

PENCILINGS OF LIVING MEDICAL MEN.

STANLEY, LOYD, SKEY, WORMALD, HUE, ROUPELL, BURROWS.

STANLEY is a little man with a small reputation, which he is very industriously trying to increase. Dame Nature never intended to make him a gentleman, or if she did, she has a strange way of manifesting her intentions. His dark, dirty-looking face would induce you to mistake him for a Jewish rag-merchant, who had half washed it before going to synagogue, or a swarthy little pig-jobber, or pork-butcher, who had turned out of the pens of Smithfield to take a turn round the quadrangle of the Hospital. He is the principal man at the school: he is a very indifferent lecturer, but a good demonstrator. Here his repetitions, like drops of water, impress more from their frequency than their force. He lectures from manuscript: he warms on the advantages of hospital practice, the rest is cold and monotonous. He has a peculiar conventicular tone and twang which is intolerable.

He is a good amputator, but a very inelegant, though safe operator. He strengthens his confidence as he proceeds with the opinion of his assistants, and seems as if he were inwardly alarmed at the freedom of the incisions which he is making. He administers instruction on Hahneman's principle in infinitesimal doses. He gallops round the ward once a day, and can be very imperious, a very turkey-cock in a pucker when he thinks proper; we have seen him jump about like a galvanized frog before now.

We are not of the vindictive or evil-tempered class, who seek for a sore spot with the instinct of a flesh-fly, and prey upon it with delight when found.

His science and judgment as a surgeon have been questioned in and out of the profession. Mr. Rolfe's ease of action, in which Mr. Stanley was amereed in heavy damages, for malapraaxis is well known, but all must admit that the best are liable to error. He is opposed to any scheme of reform that would satisfy the great body of the profession: he is so surprised at finding himself on the council, that he bows willingly the supple hinges of the knee "to the powers that be," and would sanction no plan that would disturb the serenity of their rule. Guthrie is his model in medical politics, as Lawrence is his authority in surgical practice. He never trusts to himself in anything. He is a man of no originality of mind. He is most assiduous in the labours of the dissecting-room, and has a warm heart, and can do a good act in his own rude and brusque way, without much prompting. He is much attached to his family. His wife is eminently accomplished, in domestic

virtues pre-eminent; she possesses a refined and elevated mind. This lady has done much to improve his manners. He was some years ago quite a young bear, an uncultivated eub. He is very active in the administration of a certain medical charity. He never suffers his mind to dwell upon the failings of his professional brethren. If he discovers in them a sufficient stock of probity and good-nature, he esteems it a compensation for other defects, and supports them. He seems most averse to unprofessional conduct, and to hypocrisy of every sort, as being most opposite to his own temper and character.

He has delivered some lectures at the College on the pathology of the bones. His style there was none to criticize; he appeared, however, to be well informed on the subject. He operated well, and his prognosis of the case was accurately correct on Saturday last. Though circumstances have placed him in a station which is rendered of much consequence, from the nature of the duties which he is called on to discharge, we feel that he does not occupy sufficient of the professional eye to justify us to devote more attention to him. He has compiled a very useful and practical work on anatomy.

On small men we will be mild, we rather "harpoon a shark than spear a salmon." Lloyd, Skey, and Wormald are the assistant surgeons. They got their places like their principals, by interest. Lloyd is a thin, tall, consumptive-looking man, who rarely operates, and has not added one idea to our stock of knowledge. His work on scrofula is a very common compilation. Abernethy dragged him in by the head and heels. He received many shining inducements, it is said, to do so.

Skey is a middle-aged, ruddy complexioned, honest countenanced, bald-headed man, who has wear and tear of constitution to undergo any fatigue; he has written on ulcers and syphilis, a critique upon which thus expresses itself:—six or seven lectures bound together make a book.

He is a great favourite with the students: he opened a rival school, in opposition to Stanley, who did not treat him well. The senior students of Bartholomew's met and presented Skey with a piece of plate. This was alike honourable to both parties.

The physicians are Hue, Roupell, and Burrows. Dr. Hue is a stout, able-bodied man, about 55 years of age, a grizzly countenance, all eyes and whiskers, like an owl peeping out of an ivy bush. One stare would frighten or scare a child into a fit of convulsions. He is as stern, morose, and aristocratic as he looks; he is generally at war with his colleagues: he is no favourite with the pupils; he has an unconquerable aversion to a crowd; he has an antipathy to communicate practical knowledge; he generally goes round the wards when the students are at lecture. We believe he is a learned man, although we have no evidence of the fact. The line that was written on the stoics applies to him and most of his order.

Rarus sermo in illis et magna libido tacendi.

To raise his voice beyond a whisper, or to prolong it beyond a grunt, is an act of léze majesté to the gravity of physicians. They forget that we are wicked enough to recollect that Johnson defined it as a certain mysterious carriage of the body to hide the defects of the mind.

Dr. Roupell is a sharp-faced, dark countenanced, genteel looking man, about the prime of life; he looks like a partner of Hawk and Grabhim, of Chancery Lane; you would rather he was the bearer of a favour to you than a writ; he seems as if he could find you out wherever you might conceal yourself. This agrees with his character. He is a man of ob-

servation, and may do much more than he has hitherto done. He is not a bad lecturer; he has written on typhus; he has in a plain, correct, and chaste style, given the opinions and treatment current, and nothing more.

Dr. Burrows has written some decent articles in Tweedie's Library of Medicine. He lectures, or rather he reads lectures in the school, and such lectures! he reads them like a man going over the catalogue of an auction, jerking an emphasis on every line. On Cobbett's principle, he prefers repetition to obscurity; he bobbs his head up and down into the manuscript like a duck diving for its food. There is neither manner nor method, having uttered one line, he knows not what is to follow next. Dislocated metaphors, broken sense and sentences without point or punctuation, are confounded in a chaos, like the broken stops of a barrel organ, which once wound up runs from one tune into another, and makes a medley of sounds which no one can understand. He is a very skilful prescribing physician. He is not one that promises to dispel the smouldering dreariness that reigns in Bartholomew's halls.

The assistant physicians are Farre, Jefferson, and Black. Dr. Farre is about 36, a dapper, active, genteel little man. He lectures on botany; he is too hot to wear a sword: all little men are choleric; they say he is a good pathologist. He should recollect that "he who governeth his temper is greater than he who taketh a city." He will not sign a certificate unless the pupil strictly attends his lectures. He is a punctiliously strict and honourable man. We would politely intimate to him that Bichat, when in his situation, and only thirty years of age, had name, and fame, and followers. This self-denial is rare; he thinks very well of himself, and

—*nec viget quidquam simile aut secundum.*—HOR.

Jefferson is a mild, gentlemanly, learned man, very industrious; he shuns the dust of the school, and is gradually moving himself into a good practice; all these physicians have written some little thing. Some intellectual abortion that just raised its head for a moment out of the kennel of oblivion, and has since been wrapped in lotus leaves, and quietly glided down the Acherontean stream of time. The medical and surgical departments, with the exception of Lawrence, are not above par.

It is a Royal Hospital, immensely endowed, about £47,000 a year. It is a fine building of stone, a quadrangle. It is situated between Smithfield and Christ's Hospital. The staircase was painted by Hogarth. They are adding another wing, which will make it the largest hospital in the empire.

PROBE.

EVILS AFFLICTING THE MEDICAL PROFESSION

To the Editor of the 'Medical Times.'

SIR,—As the question of reform still agitates the medical world, and as there really does appear a probability of a change of some sort taking place, a better opportunity could not be seized on for glancing at several of the numerous evils that at present seriously afflict us, and in my opinion strenuously demand attention.

The two Royal Colleges have roused from their long-continued apathy, doubtlessly discovering that a longer continuance of their dreamy slumbers would endanger their own safety, and that their ancient and highly-prized privileges would be otherwise in jeopardy. A slight movement has been made, and a semblance of liberality in some measure shown towards the great body of the profession, more nominal than real truly, as the shallow, unsatisfactory, and unimportant changes (if they can be so called) they are willing to grant

prove, and that they are evidently such may easily be seen through.

The great truth is, and it is utterly impossible to avoid seeing it, that there is no sympathy displayed, no desire exhibited, no efforts made, by those erroneously called the *heads*, to legislate for the *mass* of the profession. Their whole endeavours are concentrated towards themselves, and the one great object kept constantly in view, is not to lessen their own assumed dignity. "Let us," say they, "retain our consequence and influence; we alone are the only great men in the profession, and must therefore be regarded with due respect."

But, Sir, some important points are forgotten or quite overlooked. Whatever the so-called *pure* surgeons and physicians of the day may think, they may depend on it their rule of supremacy is on the decline, and the time is not far distant when they will find their proper level. Education is advancing, knowledge is becoming more rapidly, more extensively, and more universally diffused. They forget this, and wish to legislate as though a superior degree of information and talent could be limited to a few hospital surgeons and physicians, or as though medical men were no better educated, and as ignorant as they were thirty years ago.

The *general practitioners* are the essentially important part of the profession, it is to them that the restoration of the health of the public is principally intrusted; in their hands are the lives of the many; and it is these gentlemen that truly constitute the medical profession. All legislative acts, therefore, ought to be more particularly directed to raise the respectability, talent, and acquirements of these men.

However the one-faculty system may have been derided, however scorned or ridiculed, it appears to me that we shall ultimately arrive at a very near approach to it. That all men cannot be reduced to the same level in talent is self-evident, as there will always be some members pre-eminent for their knowledge and acquirements, but these will not be men who owe their superiority to fortuitous circumstances, but to their own innate powers of mind, and naturally increased capability of grasping and contending with difficulties, that baffle the acuteness of their less fortunately endowed brethren.

When we seriously contemplate the responsible duties that devolve on the general practitioner, how frequently the lives of individuals hinge on the judicious treatment pursued by him when first called to attend them, it is perfectly ridiculous to consider that he should be an inferior man. If he be an inferior person, can the whole College of Physicians if called in, remedy the evil? Can they undo what the medical man's injudicious treatment and the disease itself have effected for the afflicted patient? No! And why? Because it is *too late*; time cannot be recalled, medical skill, if serviceable at all, should have been enforced at the onset of the disease, or it fails to be of benefit; the patient irrecoverably suffers. Can any one say this is a mere picture of the imagination? No. If not, is it not incumbent on the legislature to provide that the lives of the public should be intrusted only to men efficiently educated, and fully competent to the treatment of disease? And if increased education and acquirements are demanded, ought not the profession itself to be protected, and every effort made to increase its general respectability? It appears to me that the following are some of the principal points to be aimed at:—

1st. That a fixed standard of education should be decided on; that a certain degree of theoretical knowledge and practical experience should be demanded from every candidate before he be allowed to practise his profession.

2ndly. That every youth, previous to his commencing the study of medicine, should be examined as to his ability; and let it be thus practically proved that he has received a good general education. Should he not display a certain amount of mental capability, he ought not to be permitted to commence the study of medicine.

3rdly. Let means be adopted for preventing too great competition among medical men, and for

limiting their number in some degree, as otherwise the respectability of the profession itself is lessened, and the public themselves are injured by it.

I shall now conclude for the present, and beg to remain, Sir, your obedient servant,

A GENERAL PRACTITIONER.

April 30, 1842.

PROFESSIONAL ETIQUETTE.

To the Editor of the 'Medical Times.'

SIR,—I am obliged to you, or to some kind friend, for sending me a copy of the *Medical Times* of last Saturday, in which I find a paragraph respecting an alleged breach of etiquette at the Carlisle Dispensary. The statement of Mr. Boyd is not correct. I deny giving the answer quoted in the *Times*. The boy alluded to was my patient, and under my care at the time as a Dispensary patient. I attended him at the joint request of Mr. Boyd, the Apothecary, and Mr. Dacre, his assistant; and if there was any breach of medical etiquette, it was on their part, for without my knowledge, and without consulting me on the subject, they afterwards called in two other medical men, viz., Dr. James and Mr. Reeves, to see the patient. I felt it my duty to reprimand Mr. Boyd and Mr. Dacre, particularly for refusing to visit the patient. I also felt it my duty to justify Mr. Reeves, as he was one of the surgeons of the Dispensary, and I fully approved of the treatment he recommended.—I am, Sir, your obedient servant,

THOMAS BARNES.

Carlisle Dispensary, April 26, 1842.

LECTURERS' CERTIFICATES.

To the Editor of the 'Medical Times.'

SIR,—There is a by-law of the Society of Apothecaries, to the effect that no lecturer shall be formally recognised until he produce testimonials of ability from *two* individuals eminent in the subject to be lectured upon. In 1840, previously to my commencing the course, I produced a certificate of ability, &c., from *one* gentleman, who is known to be an eminent chemist (Dr. Pereira), and another from a senior colleague of mine, who must necessarily be well acquainted with chemistry, from the nature of his collateral studies.

In answer to these communications, the Hall sent me by post a copy of their regulations, on the envelope, inclosing which, was written a laconic request that I should turn to a certain page, and examine a certain line, when it would be seen that their regulations had not been strictly complied with. This answer I showed to my senior colleague just alluded to, and at his suggestion did not think it incumbent on me to notice it further. The Hall admitted all my certificates, and passed my pupils, up to the beginning of this summer season, when gentlemen of my class were informed that *their lectures must be attended over again*. This information, I should remark, was communicated by the registrar.

Immediately on learning this objection, I supplied the Hall with the required additional certificates, but finding the annoyance to still continue, I called on the secretary, who denied that the certificate in question had been received: at length, however, he found the letter containing it amongst some others, which were not yet opened, *for want of time*.

From Mr. Blutch, the secretary, I have received much politeness, yet I cannot but regret that he had so little time at his command, as the Board of Examiners might have known last Thursday that their scruples had been complied with, and I might have received my formal recognition on the Friday. I need hardly explain that the Hall regulations having *now* been fully complied with, my recognition follows as a matter of course; and that, moreover, this recognition, according to another by-law of the Apothecaries' Company, is *retrospective*. Under these circumstances I cannot but hold the registrar as highly censurable in trying to frighten my pupils by a silly threat. *At least* it might have come from some other quarter.—I am, Sir, your obedient servant,

J. SCOFFERN, M.D.

OBSERVATIONS ON THE PREVENTION AND TREATMENT OF APOPLEXY AND HEMIPLEGIA.

By MARSHALL HALL, M.D.*

THE question of the causes, nature, prevention, and treatment of apoplexy and hemiplegia was a very complicated one. He thought the attention of physicians, in reference to the prevention and treatment of apoplectic and hemiplegic attacks, had been far too much confined to the question of plethora as the disease, and of depletion as the remedy. It was to him certain that such attacks might and did occur quite irrespective of general plethora; nay, that they occurred in connection with the opposite condition of the system, that of inanition and anæmia. Nor was a state of anæmia the only other condition besides plethora which led to the apoplectic or hemiplegic attack. Morbid conditions of the stomach and morbid conditions of the intestines were other sources of these seizures. But he had also observed the occurrence of apoplectic affections under other circumstances; other indubitably predisposing causes of the apoplectic seizures were dyspepsia, eachexia, and gout. Nor was even this view of the subject sufficiently extended; the liver and the kidney must do their office. These sources of the apoplectic or hemiplegic seizure consisted in conditions of the general circulatory system, and of the blood itself. There were still others of a different kind.

The first of these was disease of the heart; and this consisted, first, in hypertrophy, with augmented impulse given to the arterial blood; or, second, indilatation of the heart and disease of its valves, impeding the reflux of the blood along the veins.

The second was disease of the capillary vessels, of the minute arteries, or of the minute veins of the brain and its membranes.

Lastly, there were causes of apoplexy in the muscular efforts, by which the action of the heart itself was augmented, as in violent running, the ascent of a mountain, &c., and in other muscular efforts, by which the return of venous blood was impeded, as the efforts of vomiting, or of the expulsion of the fæces; and still more, of parturition.

This view of the causes of apoplexy would sufficiently denote the complexity of the problem of the prevention and treatment of the apoplectic and hemiplegic attack; for that prevention depended on restoring the system to a state of what may be termed equilibrium, in regard to plethora and inanition; to the removal of irritating or morbid matters from the primæ viæ; to the correction of the morbid diathesis in dyspepsia, gout, and cachexia. The prescription must include remedies and regimen to meet all these circumstances, and, as he had stated, the problem was by no means either an easy or a simple one. Yet another element in the problem was that which related to the local or topical remedies. On each of these sources of the apoplectic and hemiplegic attack, he proposed to make a few observations. These observations would be principally addressed to the medical practitioner; but as far as they might relate to the regimen, they might, he thought, be profitably considered by the patient.

1. *Of Plethora, or Fullness.*—This cause of the apoplectic or hemiplegic seizure was that which had received most attention, or rather it was that *towards* which medical opinion was most biassed, not to say prejudiced. It was unnecessary for him to describe the symptoms of this condition so well known. The most satisfactory mode of treatment was to open a

* The above is Dr. Hall's abstract of a paper read by him to the Medical Society, and published in the *Lancet*.

vein and allow the blood to flow from an ample orifice, the patient being placed in the perfectly erect position, until incipient syncope was induced; the quantity of blood which thus flowed was the diagnosis and measure of the disease in every respect. If the patient were young and robust, if the plethora were decided, and especially if there were real congestion and no laceration of the brain, a large and proportionate quantity of blood would flow before the slightest degree of syncope was manifested. No other measure afforded at once such security to the patient, and such information to the physician. It was impossible for him to speak in too high terms of the advantage of this measure in both these respects. In reference to blood-letting, there was this important question: was the case one of *congestion* or *pressure*, or was there actual hæmorrhage with *laceration* of the substance of the brain? In the former case much blood would flow before incipient syncope occurred, and much might be, must be taken; but in the latter the injury had inflicted a shock upon the system, and little blood flowed before syncope appeared; and even the loss of that little was difficultly borne. To take more would be death! It might be said that we ought to distinguish the two cases *à priori*. He replied in the words of Celsus, "*Id votum est.*" Turbidity and flushing denoted congestion, and pallor and collapse might denote laceration. But many cases occurred in which nothing so marked was observed; and in these, in the absence of an earlier and more perfect diagnosis, he knew by experience that the plan of instituting blood-letting proposed, afforded most important and salutary information, leading us on to take more blood in the ease in which greater depletion was required, and checking our depletion in those in which it would not be either well borne or remedial. But having made and repeated this statement on other occasions, and the profession being, he believed, well acquainted with it, he proceeded at once to another topic.

2. *Of Inanition.*—It was constantly his lot to see patients who were in jeopardy not from fulness but from inanition, and who had long been kept in a state of anæmia by blood-letting, general or topical, when an opposite treatment was required to restore the equilibrium of the system, and to remove the vertigo and other symptoms threatening an attack of apoplexy. A state of pallor, a disposition to faintishness, palpetation and nervous timidity, the occurrence of the symptoms when the stomach was empty, when the bowels had been relieved, and on suddenly looking upwards, or resuming the upright position on rising from bed, or after stooping, or the recumbent position: such were the diagnostic signs of a state of inanition from a state of plethora. The history of the case also afforded a diagnosis; for, although depletion might have appeared to afford a momentary relief of the symptoms, it had issued in their aggravation in general. An opposite mode of treatment, very cautiously and prudently adopted and pursued, would confirm the diagnosis, by affording a more permanent, though possibly a less immediate and marked, relief. It was to the important distinction between the immediate and permanent relief, indeed, that he would draw the attention of the profession. In the case of symptoms portending apoplexy or hemiplegia, although these might arise from inanition, yet they were invariably relieved by depletion, although they afterwards returned with augmented force. This effect was very puzzling to the inexperienced practitioner. It was explained by the fact, that the symptoms ceased under the influence of a condition allied to syncope, but returned with the reaction. This subject must be carefully studied, in order that

the nature and treatment of the case might be understood. He had next particularly to notice that the state of anæmia was not one of safety. In such circumstances apoplexy and hemiplegia, with the actual effusion of blood into the cerebrum, had occurred. Such a case was related by the late Dr. Denman: it occurred in the midst of exhaustion and anæmia from protracted uterine hæmorrhage; a clot of blood was found in the cerebrum. A similar case was detailed by Mr. Travers. This latter occurred under the actual use of the lancet, and during the flow of blood from the arm. A third case occurred to Mr. Hammond, of Brixton, after parturition: the patient was attacked with hemiplegia; she gradually recovered. We might, therefore, incautiously bleed our patients into apoplexy and hemiplegia! This statement should lead us to be very wary in the use of this remedy in doubtful or protracted cases. Even in cases of injury of the brain, as in concussion, the same question presented itself. This point was admirably illustrated by the following remark of Sir Benjamin Brodie:—"Where bleeding has been carried to a great extent, symptoms frequently occur which in reality arise from the loss of blood, but which a superficial observer will be led to attribute to the injury itself, and concerning which, indeed, it is sometimes difficult even for the most experienced surgeon to pronounce, in the first instance, to which of these two causes they are to be referred. Repeated copious blood-letting is of itself adequate to produce a hardness of the pulse, which we shall in vain endeavour to subdue by persevering in the same system of treatment. In many individuals it will produce headache and confusion of mind, not very different from what the injury itself had previously occasioned." The pallor of the countenance, the effects of position, the effects of fasting or of an active purgative, the history of the case, must be carefully considered in forming our diagnosis. The treatment would then consist in carefully restoring the system to its state of equilibrium.

3. *Of Dyspepsia and Cachexia.*—There could be little doubt that in dyspepsia the blood itself became contaminated, and, as it were, *cachectic*; on this principle we accounted for the appearance of furunculus and paronychia; for the morbid condition of the tongue and interior of the mouth, the general eutaneous surface, the secretions, &c. He had so often observed symptoms threatening the apoplectic or hemiplegic attack, in conjunction with symptoms of dyspepsia and cachexia, that he had no doubt of the vast importance of a strict attention to this subject. That very day (Oct. 1, 1841), he had been consulted by a medical gentleman from Birmingham under these circumstances. One form of this affection was the following:—Vertigo occurred with faintishness, sickishness, and a cold clammy perspiration; sometimes there was actual sickness, sometimes much flatus. In these cases the feet and other extreme parts were apt to be cold. The secretion of the liver was frequently defective, and the urine was apt to deposit the lithic acid salts. Nothing could be so injurious as blood-letting. In no case was the loss of blood repaired with such difficulty. The application of a few leeches frequently left a state of debility and pallor which were felt and seen for weeks. The treatment consisted in the correction of the secretions, and in the infusion of tone and general health into the system. The compound decoction of aloes, the infusion of rhubarb, of gentian, of cinchona, singly, or better mixed together; sarsaparilla; the vinum ferri; the bicarbonate of potass, stomachics, tonics, and antacids, in a word, were the principal internal remedies. But with these a mild, nutritious

diet, a system of gentle exercises, early hours, the tepid salt-water shower-bath, and a strict attention to the condition of the feet and general surface, by means of the flesh-brush, flannel, and a frequent change of shoes and stockings, should be conjoined. Those engaged in the harassing affairs of a London life should sleep in the country, and cherish the utmost quiet of mind.

4. *Of Gout.*—But he had frequently traced a connection between gout and its frequent attendant, the lithic acid diathesis, and the apoplectic and hemiplegic seizure. It was not merely plethora, or the opposite state of inanition, which led to the apoplectic attack. The morbid state of the blood in dyspepsia and cachexia also disposes, as he had already said, to this affection. The same remark applied to the condition of the system and of the blood, especially in gout; and, as he should have to observe immediately, the same disposition obtained in several morbid conditions of the liver and kidney. A nobleman, now no more, suffered in succession from gout and the herpes zoster, and the urine deposited the lithites copiously. He was relieved by the appropriate remedies, and became affected with an apoplectic (or epileptic) attack. A similar attack (without hemiplegia) occurred several months afterwards, and a third attack proved fatal. This gentleman was pallid, the prolabium being white. A steady perseverance in such remedies as the decoctum aloes compositum, the bicarbonate of potass, and the vinum ferri, had in other cases effectually averted the threatened evil. But he must make another remark. The vinum colchici should be given in very minute doses, as five drops thrice a-day, also steadily and perseveringly, to overcome the specific gouty diathesis. The lithic acid diathesis was not the only urinary disorder which led to apoplexy and hemiplegia. This attack, it was well known, occurs in the ease of diabetes and in that of albuminous urine. Although he has designated the attack apoplectic and hemiplegic, it was sometimes more allied to epilepsy than apoplexy. The gentleman to whose case he had briefly adverted, was affected with minute ecchymosed spots on the forehead, which he had only observed under three circumstances, viz., after severe vomiting, the effects of parturition, and the epileptic attack; when he saw him, soon after the second seizure, the insensibility had passed away, and there was no hemiplegia.

5. *Of Disease of the Heart.*—It had long been supposed that disease of the heart is a cause of the apoplectic seizure, and hypertrophy of that organ had been fixed upon as the most influential in this respect. On this question the pathologists of France were much divided. Of the two latest writers on the subject, M. Andral was of opinion that hypertrophy was really a frequent cause of apoplexy; whilst M. Louis was of the opposite opinion. There could be no doubt that, *cæteris paribus*, hypertrophy of the heart would co-operate in inducing the apoplectic attack; but he thought that a much more energetic cause of apoplexy, and of congestion and hæmorrhage in general, was that form of disease which impeded the return of the venous blood from the brain, viz., dilatation and valvular disease. The worst form of hypertrophy might be unattended by symptoms or appearances of congestion; but no severe case of dilatation or of valvular disease ever existed, without lividity of the countenance, dozing, and other appearances and symptoms of apoplectic tendency. Altogether, however, we wanted a series of cases, carefully taken and analysed, and statistically given, to establish the truth of the real influence of disease of the heart in inducing the really apoplectic seizure.

6. *Disease of the Capillary and Minute*

Vessels.—The influence of this cause of apoplexy was placed beyond question by post-mortem examination. Sometimes the morbid appearance was a dilated condition of the capillaries; sometimes an ossified condition of the minute arteries(?); sometimes a minute aneurism. Another important topic was that of "ramollissement," or softening of the brain, as the cause, and as the effect of the apoplectic or hemiplegic seizure. In resuming the subject he might remark, that it was not plethora alone which predisposed to the apoplectic and hemiplegic attack; the very opposite condition of the system, or anæmia, whether it arose from the loss of blood by blood-letting, or hæmorrhage, or from defective sanguification, was not free from this danger; dyspepsia and cachexia, as they induced external disease, as seen in furunculus, paronychia, &c., might also induce a paralytic affection, a morbid condition of the blood taking the place of plethora or anæmia.

7. *Of Muscular Efforts.*—He might make the same remark in regard to muscular efforts, which he had done in regard to disease of the heart—those efforts which opposed resistance to the reflux of the venous blood, were much more efficient causes of the apoplectic seizure than those efforts which augmented the momentum of the arterial blood. Thus, we rarely heard of the occurrence of apoplexy during the violence of the race, during the ascent of mountains, &c., but such an occurrence at the water-closet was by no means uncommon; and we all knew how apt the parturient efforts were to induce congestion of the brain, and the consequent apoplectic seizure. It would be most interesting to correct our ideas on these subjects by a cautious appeal to facts.

HOSPITAL REPORTS.

ST. GEORGE'S HOSPITAL.

JOHN HODDY, æt. 10, admitted May 13, 1841, under Mr. Hawkins, with a simple fracture of the thigh, about the inferior part of middle third, accompanied with considerable effusion, both above and below the knee. The accident was produced by falling off a ladder. General health good; fever diet. Displacement inconsiderable, it was reduced and laid upon a pillow with short splints applied laterally; the leg was also raised; cold lotion ordered.

20th. Experienced (naturally) considerable pain the day following the accident, but is now entirely free; little œdema present; health not affected.

24th. The short splints were removed and supplied by the long ones, on account of their causing considerable swelling of the limb.

June 11th. Has been quite free from pain since last report; no œdema of limb.

20th. Progressing rapidly to a permanent cure. Splints removed a day or two since.

30th. Yesterday fell down with considerable force against the bed, but experienced no pain. To-day is to go out, cured.

William Nowlin, æt. 40, admitted June 22, 1841, under Mr. Babington, with compound fracture of both bones of right leg, at lower part of middle third. Wound of considerable size, produced by the falling of materials from a scaffold upon it. Considerable hæmorrhage ensued; the edges of the wound were approximated by lint, and kept in apposition by plaister to stay the bleeding. The leg was placed in a fracture-box, and cold lotion applied. Addicted to drinking; tongue white; bowels irregular; pulse excited.

23. Considerable tension took place yesterday from extravasation of blood, and patches of

redness were visible about the wound; the pulse got up, and headache was complained of. Ordered fever diet; bowels open.—R. vini. antim. tart. 3j.; haust. ammon. acet. ʒiiss.; 6tis horis.

25. Pulse lessened, and feels considerably better; limb easy; little puffiness in situation of fracture; no shivering.

28. To-day complains of much pain in leg; ordered to be removed from box and placed in a junk; bowels open; disposed to be irritable. Broth diet.

July 2. Very irritable; shivering last night; pulse quick; bowels confined; tongue white. R. olei. ricini. ʒiiss. statim. Omit broth diet for fish and potatoes.

3. Bowels have acted; feels better; the lint has separated from the wound and left a healthy sore; simple dressing to be applied; no return of shivering.

8. Going on well; wound healthy, discharge free; no return of shivering.

13. Has experienced a little pain occasionally since last report; œdema not subsiding; tongue clean; pulse full; bowels regular. Apply a poultice.

18. An abscess formed and pointed above the sore, which was opened yesterday, and free exit given to a quantity of bloody matter; discharge free. To-day feels much easier; the leg is again in a fracture-box.

27. Discharge healthy, but lessening in quantity; going on well; porter ʒj. daily.

August 5. Poultices have been discontinued for some days, and the sore (which is healthy and filling up) dressed with brown dressing.

14. To-day removed from box, and found firmly united; a small opening still exists, leading apparently to a piece of bone. Extra diet.

21. Still going on well.

24. Box removed and splints applied; to get up.

Sept. 1. Discharged, but as the opening still exists, (mentioned on the 14th August,) he was made an out-patient.

REMARKS.—Suppuration commenced pretty early, and the matter was given free exit, from which time he continued to improve, and finally recovered. The irritable temperament may arise from his being addicted to drinking. The slight attack at the commencement was soon checked by the administration of the vin. ant. tart., &c. Time will have to elapse before a complete recovery is established, as the exfoliation of the small piece of dead bone will finally ensue.

MEDICAL MEMS. OF THE WEEK.

By PERISCOPICUS.

APPETITE.—In the cold and temperate zones, says Liebig, the air, which unceasingly endeavours to consume the body, forces us to work and exertion, to procure the means of counteracting this inward consumption; whilst, in warm climates, the demands for the procuring of food are by no means so urgent. Our clothes are but equivalents for our food. The warmer we clothe ourselves, the more we lessen the necessity for eating; because the loss of warmth, the cooling, and therewith the compensation to be effected by food, is lessened. If we went naked, as the Indians, or were exposed to cold in the North, by hunting or fishing, we should be able to devour half a calf, and afterwards more than a dozen tallow candles, as warm-clothed travellers with astonishment have told us. We should be able to consume the same quantity of spirit, or of oil, without injury; because the carbon and hydrogen which they contain serves to counterbalance the external temperature. The quantity of food neces-

sary to be eaten, according to the foregoing principles, should be adapted to the number of respirations, the temperature of the inspired air, and to the quantity of heat which we give out. No isolated opposing facts can change the truth of this law of nature. The Neapolitan cannot consume more carbon and hydrogen in his food than he expires; and no inhabitant of the North can expire more carbon or hydrogen than he has consumed in his food, without inflicting a transitory or permanent injury on his health, except he be in a state of disease or of hunger, conditions we will somewhat nearer consider. The Englishman finds with regret his appetite, which gives him often-returning enjoyment, failing in Jamaica, and he succeeds, in fact, by means of Cayenne pepper, and the strongest stimulants, in taking the same quantity of food as in his native country; but the carbon of this food which goes into the body is not consumed. The temperature of the air is too high, and a relaxing heat allows of no increase of the number of respirations (by means of exercise and exertion) to proportion the consumption of the body to that which has been eaten. Those patients in England whose diseased organs of digestion lose wholly or partially the power of changing the food into that state in which it is best fitted to combine with oxygen, by way of counteraction are sent to southern countries, where the quantity of inspired oxygen is lessened in so great a degree, and an improvement in health is most evident. The unhealthy organs of digestion have power enough to proportion the small quantity of food they are able to take, to the lessened quantity of oxygen which is absorbed. In colder climates the oxygen acts even on the lungs themselves. In summer, among us, in Germany, liver diseases (carbon diseases) are most prevalent. In winter, diseases of the lungs, (oxygen diseases). The cooling down of the body, from whatever cause it occurs, necessitates a greater measure of food. Simply remaining in the open air, whether in a coach or on the deck of a ship, increases, by radiation and evaporation, the loss of warmth: even without any exercise, we are constrained to eat more than usual. The same is true of persons who are accustomed to drink large quantities of cold water, which passes off again at a temperature of 37 deg. C. It increases the appetite; and feeble constitutions must, by persevering exercise, take into the body oxygen sufficient to compensate for the warmth which is lost. Strong and continued speaking and singing, the crying of children, moist air, all these exercise a determinate, recognisable influence on the quantity of food necessary to be eaten. In the preceding remarks, it has been assumed that it is especially the carbon and hydrogen which serve to combine with oxygen, and to produce the animal heat. The simplest observations show, in fact, that the hydrogen of the food plays a no less important part than the carbon.

APPARATUS FOR PREPARING EXTRACTS BY SPONTANEOUS EVAPORATION. By MR. W. TWINBERROW.—The object of this apparatus is to facilitate the desiccation of vegetable juices, watery solutions, pigments, precipitates, leaves, flowers, and roots, and the efflorescence of salts, on the principle of the spontaneous process (that is, the action of a current of dry air) upon a large scale, in a small compass. The apparatus consists of an oblong chamber divided into three compartments, by canvass partitions. The centre partition is intended to contain a small stove, on one side of which is a revolving fan, and on the other a rack, which contains a series of flat dishes, on which the extract is placed—the object of the two canvass partitions (which should

be moveable) is to retard the progress of the air before it becomes warmed sufficiently by the hot plate, which is placed within the partitions. The intention of the fly-wheel (the velocity of which should be increased by multiplying wheels, and enclosed precisely as in a winnowing machine, used by agriculturists) is to force a current of fresh air into the chamber through the first partition of canvass, displacing the warm air in the chamber, by forcing it through the second partition, when it passes very regularly over the whole of the plates on the racks, and carries off with it a considerable quantity of moisture.—The temperature may be ascertained by the thermometer, and raised or lowered as may be necessary, by the lid at the top. One side is made to shift, for the convenience of access to the trays; and when drying articles in the state of powder, the trays should be covered with fine muslin, to prevent the particles being driven off the trays by the current of air. The open end of the machine may be partially closed—this will be found advantageous for some purposes.

COUNTER-IRRITANTS.—Dr. Turnbull has published the following formulæ:—*Tinctura capsici concentrati*—R. *Capsici baccarum*, ʒiv.; *spiritus vini rect.*, ʒxij. *Macerata per dies septem et cola.* (It may also be made with advantage by displacement.) This concentrated tincture is used as an external application, and is found to be a powerful rubefacient and counter-irritant, for which purpose the ordinary tincture of capsicum is not sufficiently potent. *Veratria*, dissolved in this tincture, acquires increased activity; the capsicum apparently facilitating its absorption into the skin. Four grains of *veratria*, dissolved in an ounce of the concentrated tincture of capsicum, will be found as powerful in its effect as twelve or fifteen grains dissolved in alcohol. *Pulvis aluminis et capsici*—R. *Aluminis sulphatis, partes tres.*; *tinct. capsici, concentrati, partem unam.* *Misce et sicca.* A very small quantity of this powder, applied to the tonsils, is found more efficacious, in some cases, than an alum and capsicum gargle. *Unguentum ipecacuanhæ*—R. *Pulvis ipecacuanhæ*, ʒij.; *olei olivæ*, ʒij.; *adipis*, ʒss. M. ft. *unguentum*—*Unguentum emetinæ*: R. *Emetinæ*, gr. xv.; *sp. vini rect. q. s.*; *adipis*, ʒss. M. ft. *unguentum.* Dr. Turnbull states, that he has found this ointment particularly efficacious as a rubefacient in pulmonary and rheumatic affections, producing little or no pain or inconvenience to the patient.

ERUPTIVE DISEASES.—It is now generally admitted that these cases should be treated on general principles, and not with regard to local or endemic modes of treatment; however local remedies are found beneficial in conjunction with internal administrations.

CHLOROTIC PALPITATIONS.—It is said that puberty and the female sex predispose to these affections, but they may come on with other signs of chlorosis or anæmia; they come on suddenly, and depart equally so—sometimes they have perfect intermissions, and are worst after bodily and mental excitement, and at that period when the menses ought to appear.—They occasionally remit, under the measures which relieve the other chlorotic symptoms, as iron, &c. *Tonics and ergot of rye are useful.*

SYPHILIS.—The French surgeons seem to have acquired greater skill than even the English, in treating syphilitic cases. From the great pains taken by Ricord and others, they would seem at present to be taking the lead in the investigations on this subject. In treating a very recent case of gonorrhœa, and previous to any redness around the orifice or pain in making water, Mr. Acton states that the disease may frequently be cut short by the following method. In addition to the more

common means, twelve injections of a solution of nitrate of silver, two grains to ʒ viij. are to be used in the course of forty-eight hours, at regular intervals. These injections are then to be discontinued, and cubebs and copaiba are to be given. These latter medicines according to Velpeau are best combined in the proportion of one part of copaiba to two of cubebs, and with this Mr. Liston agrees in his last edition of the *Elements of Surgery*. Velpeau, however, seems to recommend a much stronger solution of the nitrate of silver than Ricord, stating that one grain to the ounce is about the proper strength, and this he uses about three times a-day, for about three days; if persevered in longer, it may produce a fresh irritation in the urethra. He recommends also that the canal be kept constantly compressed by means of small graduated compresses, dipped in starch, applied from the bulb to the fossa navicularis, and retained by means of a bandage. It seems to us, however, more prudent to adopt the strength of the solution recommended by Ricord and Acton.—*Mr. Braithwaite.*

SPASMS OF THE STOMACH.—Dr. Watson says, you will meet sometimes with what is called spasms of the stomach (and he supposes it is such) in gouty people, who are then said to have gout in the stomach. The pain comes on in sudden and severe paroxysms, and is removable in general by laudanum and stimulants—brandy, for example, or by the mustard poultice. On these cases, however, we should look with anxiety and apprehension. In some instances the attack is really inflammatory, and would then be aggravated by a stimulant treatment.

IRIDERMIA.—Mr. France has published a case of absence of the *iris* in both eyes, in the person of a young woman, an out-patient at the eye-infirmary at Guy's. She is unable to bear exposure to a strong light; sunshine in particular is disagreeable to her, and causes profuse lachrymation. Objects are only distinctly seen when within the distance of a foot or two. The eyelids are habitually more than half closed; the globe of each eye affected with an almost incessant oscillatory motion in a horizontal direction, and the power of directing the eye towards the object, particularly upwards or downwards, is much impaired. The corneæ are partially clouded. "The sclerotic coats are moderately healthy, perhaps rather more blueish than natural; their degree of tension is that of health. On inspecting the right eye very carefully, and looking above or beside the corneal nebula, there is observed a central opacity of the anterior capsule of the crystalline, about the size of a large pin's head; and a similar spot is also to be seen on the posterior capsule, the lens remaining perfectly transparent."

URINARY CONCRETIONS.—M. Leroy not only regards the use of alkaline drinks and baths as generally inefficient for the cure of urinary calculi, but he thinks it a dangerous practice to force the kidneys to secrete alkaline urine during a considerable length of time. Many other practitioners, and amongst them M. Prunelle, inspector of the Vichy springs, are of the same opinion. He repeats the objection of Marcet and Prout, that the earthy phosphates held in solution by the free acids of the urine may be precipitated when the acids are neutralised, and thus give rise to calculi containing the phosphate and carbonate of lime or magnesia. Cases of this kind occur in persons labouring under catarrh of the bladder, where the urine is altered in quality and retained in that organ: they do not occur under other circumstances, and the phosphatic diathesis seems to be an effect of the inflammatory affection of the bladder. The spontaneous changes which take place in the composition of urinary concretions

may depend on the same cause; thus, when the urine becomes ammoniacal from inflammation of the bladder, the uric acid concretions are covered with a layer of a phosphate; and hence the great proportion of alternate calculi, which, according to Dr. Prout, form one-fourth of the whole number. M. Prunelle has seen patients who passed considerable quantities of uric acid gravel almost immediately after taking the alkaline waters; in some cases the quantity was such, that, if we suppose the gravel to have been formed in the kidneys, the latter must have been larger than the stomach. Perhaps the use of alkaline remedies occasions, in some patients, an abnormal secretion of uric acid, for we know that the presence of an alkali often gives rise to the formation of an acid.

CICATRICES.—M. Gimelle recently showed a soldier to the French Academy of Medicine, who had been wounded with a *yataghan* in seven different parts of the body. On all the cicatrices were formed flat, pediculated tumours, of a rose colour, and somewhat resembling mushrooms. The patient never had syphilis. M. Velpeau regarded the tumours as examples of *keloids*. M. Gerdy and other members were disposed to consider them as simple vegetations from the cicatrix or wound, and recommended excision.

AIR.—M. Marignac has analysed atmospheric air, and in 10,000 parts of air he has found, on an average, 2,229 parts of oxygen; a proportion exactly similar to that found at Paris. M. Levy analysed the air at Copenhagen, and found in various experiments on 10,000 parts of air the following quantities of oxygen: 2,300, 2,302, 2,296, 2,299, 2,301. Air collected at the sea gave the following proportions of oxygen: 2,257, 2,258, 2,269, 2,256. The air collected on the coast, as it came in with the sea breeze, gave 2,302, 2,301, 2,302.

PNEUMONIA.—On the 11th of March, Dr. Hemphill was called to see Mrs. —, ætat 60, who had laboured under an attack of influenza about three weeks before, from the effects of which she had been gradually recovering. Her breathing seemed a little hurried, which did not alarm her, as she had been subject for many years to attacks of spasmodic dyspnoea. She stated that her appetite was not so good as it had been for the last few days, but did not feel unwell in any other respect. On inquiry he found that she had a slight pain in the right side, but not sufficient to cause her any uneasiness—can lie equally well on either side—has had a trifling cough since she was attacked with influenza, unaccompanied with expectoration for the last twenty-four hours—tongue clean and moist—bowels open—pulse 96, rather weak. On examination, he found two-thirds of the right lung from below upwards completely hepatized. Though the margin of the diseased portion of lung was very well defined, he could not distinguish any distinct crepitus—bronchophony audible—dulness on percussion—left lung healthy. As the patient was so far advanced in life, and had been previously very much debilitated, he did not think it advisable to take blood, even locally. The patient recovered under the use of calomel and opium and counter-irritation.

ERGOT OF RYE, BY DR. PEREIRA.—The nature of ergot has been for many years past a fertile subject of discussion; but considerable light has been recently thrown on it by Mr. Smith, of the Kew Gardens, and especially by my friend and colleague, Mr. Quekett. The observations of these botanists, as well as those of Lévillé, Phillipar, and Phœbus, seem to prove that ergot is a disease of the grain caused by the presence of a parasitical filamentous plant, probably a fungus. In every ergotised grass yet examined (and I have a considerable

number of genera in my collection) this fungus has been detected. Moreover, it is not peculiar to the ergot of one district or of one country. It has been found by Mr. Quekett in every ergotised plant growing in this country which he has examined—it has been found in the ergot of Germany by Phœbus—and in that of France by Phillipar. It might be alleged, perhaps, that the presence of this fungus is not essential to the production of the ergot; but, if this were the case, it is somewhat curious that a single specimen of ergot without the fungus has not been produced. It is true, that Mr. Bauer, in his splendid drawings of ergot, now in the British Museum, does not represent it; but when his attention was drawn to it, in later times, by the statements of Smith and Quekett, he then observed it, and has published some drawings of it. We are not, however, to infer that it did not exist in the ergot formerly examined by him, any more than we should the absence of the striæ of muscular fibres in the muscles which were examined many years ago by him, in conjunction with Sir Everard Home. Imperfect optical instruments were, doubtless, in both cases, the cause of his failure to discover the objects referred to. But it has been said that, while many gramineous plants are infected with this same fungus, a few only become ergotised, and that amongst agricultural grains the rye is the only one which is subject to that disease. The latter part of this statement is certainly incorrect. I have placed on this table, ergot of wheat given to me by my friend Professor Henslow. It is a portion of some picked out of two bushels of Revet wheat by his miller. Here also are other grasses infected; and I believe the disease to be much more common than is usually supposed. In one season, my friend and former pupil, Mr. Cooper, of Greenwich, found every grass in Greenwich marshes infected with it. I am not prepared to deny that this same fungus may be present in grasses that are not ergotised; but I should like to know at what period of growth such grasses became infected with the fungus, and whether this fungus had gained access to the ovary. For it is obvious, that unless the ovary be infected, no argument against Mr. Quekett's views can be drawn from the presence of the fungus. One important fact has been recently ascertained by Mr. Quekett; it is, that if grains be immersed in water in which the sporidia of this fungus be contained, the plants produced by the germinated seeds are ergotised.

IODINE.—That met with in this country, says Dr. Pereira, was formerly imported. For many years, however, it has now been manufactured in this kingdom. At the present time, its British manufacture is limited to Glasgow, where it is made from kelp liquor in a leaden still, with which a series of spherical glass receivers is connected, and in which it is condensed. As met with in commerce, it is contaminated with water, and this is the only deterioration of any moment to which it is subject. *Iodide of potassium*, which, as a medicine, is coequal with iodine, is however subject to adulteration to a great extent. Some years since, he analyzed a sample of this salt, which contained no less than 77 per cent. of carbonate of potash. This adulterated salt presents no appearance of crystalline form, but somewhat resembles pearlash in its appearance, and yields a white precipitate with lime-water.

CITRATE OF IRON.—According to Mr. Bell, this preparation was first introduced by M. Bérar, of Paris. His process was published in 1831, and is as follows:—Take of crystallized citric acid, four ounces; distilled water, four ounces; moist hydrated peroxide of iron, about eight ounces. Weigh the acid and water in a platinum capsule, and apply heat; when the

acid is dissolved, and the solution boiling, saturate it with the oxide of iron, adding rather more of the oxide than the acid will dissolve. When cold, filter the solution, and make the quantity sixteen ounces. This solution, spread out on glass, will speedily dry, and separate itself from the glass in thin lamellæ. The hydrated peroxide of iron may be prepared either from the sulphate or from the sesquioxide of iron. A formula for its preparation from the sulphate is given in the Edinburgh Pharmacopœia. It is prepared from the sesquioxide by dissolving this oxide in hydrochloric acid, and precipitating with ammonia. The oxide of iron and citric acid combine in the proportions of forty parts of the oxide to seventy of the crystallized acid. In using the moist hydrated oxide, as the degree of moisture will be subject to variation, the oxide should be added in excess. The salt, thus formed, is uncrystallizable; it strongly reddens litmus paper, and has an acid, not unpleasant, taste. It is very slowly soluble in cold water; so much so, indeed, as to have led to the supposition of its being insoluble. It dissolves readily in boiling water. If to the acid citrate of iron in solution, prepared according to the foregoing process, ammonia be added so as to neutralize the excess of acid, a double salt is obtained, which dissolves in cold water much more readily than the citrate, and which, from its neutrality, may in some cases be preferable to the other. This neutral salt is frequently sold under the name of *citrate of iron*.

PROLAPSUS.—A lady, 50 years of age, suffered from enormous dilatation of the anus, with a permanent, hard, and very painful prolapsus, insomuch that she could not remain in any other than the recumbent position. M. Begin, who was called in, determined to apply iron at a white heat, as the only means of destroying the projecting portion, and contracting the enlarged opening. The patient was placed on her right side, the nates projecting beyond the edge of the bed, the left thigh flexed, the right extended, and was supported in that position by assistants, by whom the right nates was raised. As much of the prolapsus as possible was returned, leaving only the indurated and fleshy portion externally. Three applications of the actual cautery were made, the shape of the first and second instruments used not admitting of the parts being fully cauterised; a dry, brownish eschar formed, and the patient suffered less than she expected. Cold water applications were at first had recourse to. On the fifth day suppuration commenced, and the sloughs began to separate. At a month's end there were no traces either of the disease or of the operation. The anus would scarcely permit the entrance of the finger. The same operation was successful in another case of a similar character.

STATISTICS OF LIVER DISEASE.—From a valuable document by Major Tullock, published in Dr. Johnson's new edition of his work on Tropical Climates, it is mentioned that in the windward and leeward command, of the average strength, 44 persons were attacked with inflammation of the liver and jaundice, of whom died one in twelve; and that in Jamaica, of the garrison 95, 3-5ths of which was fatal, one in eleven were attacked. When we turn to the Eastern world, we observe, that in Madras, the proportion attacked was one in 15, 5-6ths of whom died, one in fourteen; whilst in Bombay, the numbers attacked were 1 in 16½, in which the fatality was 1 in 17½. The deaths by hepatic disease among the European troops in garrison of Fort William are stated in the returns furnished on the spot at 1 in 18, while at Chindurah, but eighteen miles distant, they are 1 in 7; at Berhampore, 1 in 9; at Winapore, 1 in 6;

and lastly, in the general hospital, Calcutta, 1 in 9. Mr. Martin suspects an error in the estimate of Fort William.

MEDICAL NEWS.

CHARING-CROSS HOSPITAL.—The Medical Society of this Hospital closed its meeting for the season in the absence of the president. Mr. Monteath took the chair. After a very animated discussion on an adjourned debate on erysipelas, carried on by Messrs. Celthrop, Golding, Lynch, Terry, Godfrey, &c., the chairman addressed the meeting, regretting the unavoidable absence of the president, explained the objects and advantages of such a meeting, and mentioned the great assistance he received in the formation of the society from the medical officers and professors of the hospital, some of whom had accepted the office of vice-presidents, and assisted by their presence materially to the advancement of the society; and after expressing his sincere thanks for the honour conferred upon him, in electing him the chairman of the council, moved resolutions that the meetings of the society adjourn until the winter session, October, 1842; and voting thanks to the governors for the use of the theatre; to the president, Wm. Hancock, Esq., for the able manner in which he discharged his duties during the session; to the vice-presidents, for their attendance at the various meetings, &c. Several gentlemen having contributed very considerably, at the various meetings, to the interests of the discussion, the council were anxious to confer upon them some mark of their esteem by electing them honorary members. These gentlemen were Dr. Meeklam, Dr. Thring, and Mr. Woolcott.

MIDDLESEX HOSPITAL MEDICAL SCHOOL.—Distribution of Prizes, Thursday, April 21, 1842, James Arnott, Esq., in the chair. Anatomy—Prize, Mr. C. E. Hatherly; certificate, Mr. John Crawley. Physiology—First prize, Mr. Henry Greaves; second prize, Mr. Thomas Graham; certificate, Mr. W. Hoblyn. Practical Anatomy—First prize, Mr. T. S. Smyth; certificate, Mr. A. Peat. Second prize, Mr. C. W. Smith; certificate, Mr. Broadbent. Practice of Medicine—First prize, Mr. T. Graham; second prize, Mr. Nisbit; third prize, Mr. Baker; certificate, Mr. Walker. Second certificate, Mr. W. Hoblyn. Surgery—Prize, Mr. A. Peat; certificate, Mr. T. S. Smyth. Midwifery—First prize, Mr. R. D. Ward; second prize, Mr. T. S. Rising; certificate, Mr. Baker; second certificate, Mr. Walker. Chemistry—First prize, Mr. C. R. Morgan; certificate, Mr. J. Stephens. Materia Medica—Prize, Mr. C. R. Morgan; certificate, Mr. J. Stephens. Forensic Medicine—Prize, Mr. Henry Greaves; certificate, Mr. Taylor. Botany—Prize, Mr. Charles R. Francis; certificate, Mr. Thomas Rising.

UNIVERSITY COLLEGE.—Materia Medica—Gold medal, Mr. Harring; first silver medal, Mr. Worsley; second silver medal, Mr. W. T. Edwards. Anatomy and Physiology—Gold medal, Mr. Fearnside; first silver medal, Mr. J. Thompson; second silver medal, Mr. Stokes. Senior Class of Anatomy—Silver medal, Mr. Jackson. Senior Class of Anatomy—Gold medal, Mr. Fearnside; first silver medal, Mr. Hearne; second silver medal, Mr. J. Thompson. Midwifery—Gold medal, Mr. Preston; first silver medal, Mr. Garrod; second silver medal, Mr. Hearne. Chemistry—Gold medal, Mr. R. D. Harling; first silver medal, Mr. Worsley; second silver medal, Mr. W. Brown. Surgery—Gold medal, Mr. Hearne; first silver medal, Mr. Topham; second silver medal, Mr. L. Buckle. Medicine—Gold medal, Mr.

Garrod; first silver medal, Mr. P. H. Williams; second silver medal, Mr. Henry Allen.

PAPAL VACCINATION.—A late number of the *Diario de Roma* contains a decree of the Papal Government for the propagation of vaccination. This administrative measure has been prompted by the recent prevalence of small-pox, to which numbers have fallen victims in the Roman states. Cardinal Mattei, the Papal Secretary of State for the interior, has ordered that the decree above-mentioned shall be read in all parish churches, so that the poorer classes may be induced to avail themselves of the benefits of vaccination. Henceforth no one is to receive public charity without producing a certificate in proof of having been vaccinated. This regulation will, it is hoped, have the effect of overcoming the prejudice of the ignorant, who obstinately refuse to protect themselves against a disease which has proved one of the most fatal scourges of mankind.

SIR CHARLES BELL.—We regret to have to announce the death of this distinguished surgeon. He died on Friday at Hutton Hall, near Worcester, where he was staying on a visit at dinner. On Thursday he complained of slight spasms, but being subject to them, he treated the affection as a slight attack, and the next morning he was found lifeless in bed. He was the fourth son of the Rev. W. Bell, of Edinburgh, and was knighted in 1831. We shall, in one of our future numbers, give a lengthened memoir of this lost light of our profession.

MEETINGS FOR THE ENSUING WEEK.

- MON. Geographical Society, half-past 8 p.m.
 — Medical Society of London, 8 p.m.
 — Phrenological Society, 8 p.m.
 TUES. Royal College of Surgeons, lecture, 4 p.m.
 — Royal Medical and Chirurgical Society, 8 p.m.
 — Zoological Society, half-past 8 p.m.
 WED. Royal Medical Botanical Society, 8 p.m.
 THU. Royal College of Surgeons, lecture, 4 p.m.
 — Royal Society, 8 p.m.
 FRID. Royal Astronomical Society, 8 p.m.
 — Royal Institution, half-past 8 p.m.
 — Apothecaries' Hall, lecture, 3 p.m.
 SAT. Royal College of Surgeons, lecture, 4 p.m.

ADVERTISEMENT.—Mr. Yearsley's Letters to the President and Council of the Royal College of Surgeons in London, on the unprofessional conduct of Mr. Liston:—

Mr. President and Gentlemen,—Most reluctantly I come before you in the character of a complainant, more especially as the gentleman whose conduct I must arraign is a member of your honourable Council.

It may still be in your recollection that, in the month of March, 1841, I addressed a note to many of the leading members of the profession, inviting them to witness and investigate the effects of extirpation of enlarged tonsils, and also of the uvula, in certain cases of Stammer and defective speech. In the course of my professional practice, I had frequently performed the former of these operations for the cure of deafness. For this I claim no merit. It had frequently been done with the same intention. Neither was the latter operation novel. Both, in short, had long been recognised as minor surgical operations. The only novelty consisted in their application to the treatment of Stammer, and that I freely own was the result of accident.

In some cases in which Deafness and Stammer were associated with enlarged tonsils, and an elongated or thickened uvula, I found that on the removal of these morbid conditions, not only the deafness, but the defective speech, was cured or relieved. The observation of this fact led me to direct my attention to Stammer; and after the treatment of numerous cases, with more or less success, I gave the result of my researches to the profession; and in selecting the mode of doing this, I consulted the feelings of the profession, my own duty as a member of the College, and altogether waived my personal interest.

Among others whom I invited to be present were Sir Benjamin Brodie, and Mr. Robert Liston. I have preserved the replies of these gentlemen.

The first, from Sir Benjamin Brodie, is remarkable for its gentlemanly and candid tone. It is as follows:—

"DEAR SIR, "14, Saville-row, March 8, 1841.
 "I thank you for your invitation, and am sorry that I cannot avail myself of it. It will give me great pleasure to learn that your efforts to cure so great a calamity prove successful.
 Your faithful servant,
 "B. C. BRODIE."

The second reply is more brief. It is from Mr. R. Liston:—

"Mr. Liston presents his compliments to Mr. Yearsley, and regrets he cannot be present at his meeting to-morrow.
 "5, Clifford-street, March 8, 1841."

Upwards of five hundred medical men did, however, witness my operations; and I may say that almost every one was struck with the surprising success which appeared to attend them.

The consequence of this discovery to myself has been a very great influx of patients with Stammer and other defects of speech. The fact of my having thrown open my doors to the profession contributed, no doubt, to this result, for many of them sent me patients, and some even intrusted members of their own family to my care.

That the new practice, like every novelty, should meet with enemies, might be expected; but that the operations in question should be termed "unwarrantable incisions," and "horrible mutilations," and that such epithets should be applied to them by a member of the Council of the College of Surgeons, will, I conceive, excite your surprise and astonishment.

In the *Literary Gazette* for March 6th, there is a pretended review of my recent publication "On Deafness, from Morbid Conditions of the Mucous Membrane," &c., &c. The editor departs from the fair line of criticism to denounce my operations for stammering, concerning which the book has not a single word; and not content with grossly libelling me himself, and attributing to me the most monstrous absurdities, calls Mr. Liston to his aid.

"This gentleman's (Mr. Yearsley's) mania (says the editor) for cutting away the organs of speech and hearing for stammering and deafness, appears to us to be quite horrible. We refer for confirmation of our opinion to as high an authority as lives." See p. 161, col. 2. E. L. G.; and upon turning to the page indicated, I find the following testimonial:—

"5, Clifford-street, March 1, 1842.
 "I have, with much pleasure, witnessed Mr. Hunt's process for the removal of stammering. It is founded on correct physiological principles; is simple, efficacious, and unattended by pain or inconvenience. Several young persons have, in my presence, been brought to him for the first time; some of them could not utter a sentence, however short, without hesitation and frightful contortion of the features. In less than half an hour, by following Mr. Hunt's instructions, they have been able to speak and to read, continuously, long passages without difficulty. Some of these individuals had previously been subjected to painful and unwarrantable incisions, and had been left with their palates horribly mutilated, hesitating in their speech, and stuttering as before.
 "ROBERT LISTON."
 "Mr. Hunt, 224, Regent-street."

The language of the testimonial is only a repetition of the attacks in the *Literary Gazette*. I feel assured, therefore, you will think me justified in writing to Mr. Liston the following note, after the perusal of the testimonial:—

"Mr. Yearsley presents his compliments to Mr. Liston. Mr. Yearsley's attention has been drawn to a testimonial published in the current number of the *Literary Gazette*, and stated to emanate from Mr. Liston in favour of a Mr. Hunt, who professes to cure stammering by some elocutionary process. In this testimonial it is asserted that Mr. Liston saw certain persons relieved of impediment who had previously been 'subjected to painful and unwarrantable incisions, and had been left with their palates horribly mutilated, hesitating in their speech, and stuttering as before.'

"As Mr. Yearsley originated his operations upon the throat and palate, not from mere theory, but from actual experience, for the relief of certain varieties of Stammer, dependent on physical obstruction; and as similar language to that employed by Mr. Liston has been directed against Mr. Yearsley personally by the soi-disant professors of elocution for some months past, by public advertisement, he begs to know whether the patients alluded to owe the alleged mutilations to operations performed by him?

"In order to ascertain the final results of treatment, Mr. Yearsley has forwarded a copy of the enclosed circular* to

* "29, Sackville Street, Piccadilly.
 " - - - months ago I performed an operation on you for the relief of an impediment in Speech. I shall esteem it a great favour if you will make me acquainted with the results up to the present time; and as to its—
 Effect upon the impediment,
 Effect upon the strain or pain with which it is generally accompanied,

each of his patients, and has yet to find one case in which he has inflicted inconvenience or injury, even where no advantage has been derived.

"29, Sackville-street, March 11, 1842."

Receiving no answer, I again wrote:—

"SIR,—On Saturday morning, the 12th instant, I sent you a note, upon a subject which appeared to me calculated to compromise my professional reputation. May I beg the favour of an answer in the course of to-morrow.

"I am, Sir, your obedient servant,
 "J. YEARSLEY."
 "29, Sackville-street, March 14, 1842."

Time wore on without bringing me any reply from Mr. Liston. My letter had laid him under an imputation most nearly affecting his honour. His testimonial had been made, either with or without his connivance, the handle of aspersions on myself, or, at all events, on the operations I had originated, of the grossest kind. On his own words alone had been reared a tissue of falsehood and unmerited calumny. I gave him an opportunity of setting himself right by acknowledging that his testimonial had been turned to improper uses, or of allowing me to adduce evidence for the correction of his judgment, if that had led him wrong. But his silence was a tacit refusal to accord me either the one or the other mode of justice. I may ask, was this conduct indicative of an honourable mind, which, feeling a stain like a wound, would have lost not a moment in repairing an injury unjustly or unconsciously inflicted? Was it the behaviour of one who felt himself above all shadow of suspicion of having acted with intentional injustice? Above all, was it honourable to the head or heart of one who, on taking office as a member of the Council of the College of Surgeons, bound himself by the most solemn obligation "to demean himself honourably in the practice of his profession, and to the utmost of his power maintain the dignity and welfare of the College?" or of one who, on the same occasion, swore "not to advertise or publish anything prejudicial to the interests, or derogatory to the honour of the College, or disgraceful to the profession of surgery?"

My first impulse, under the wrong from which I suffered, was to resent Mr. Liston's conduct to the utmost, and endeavour, as I felt I had the means, to convict him, in the eyes of the world, of a false and malicious slander. On mature consideration, aided by the counsel of friends on whose judgment I rely, I came to the determination of submitting the whole matter to a more impartial tribunal than Mr. Liston's sense of justice, or my own feelings—to your own honourable body, from whom I feel secure of fair and candid treatment.

Mr. President and Gentlemen,—I read in the regulations "that the College will at all times protect and defend every member who may be disturbed in the exercise and enjoyments of the rights, privileges, exemptions, and immunities acquired by him as a member thereof."

Relying on this liberal and just regulation, nothing would give me more pleasure than that my operations and their results should be made the subject of your most rigid scrutiny, either by examining the subjects of them yourselves, or the medical gentlemen, members of the College, who witnessed them. If, in any instance, they have been "horrible mutilations," "unnecessarily severe," "sanguinary," or "unwarrantable," let me receive the full measure of your disapprobation and censure. If, on the other hand, they have been such only as you yourselves have, under the same or other circumstances, performed—if cure in some, amelioration in others, and injury in none, have been the result, I would claim the expression of your sympathy with me, under a gross act of unprovoked injustice.

Whether Mr. Liston has demeaned himself honourably as a member of the Council, in encouraging quackery, by giving a testimonial in favour of a *secret*, and therefore empirical, process,

Quality and power of the voice,
 Compass, or range of the voice,
 Distinctness of articulation,
 Swallowing and breathing,
 Susceptibility to cold,
 General health.

"These, and any other particulars, are only required to enable me to draw up correct statistical details of the results of my operations, and not with any view to the publication of particular cases.—I am, yours, very obediently.

"JAMES YEARSLEY."

which nobody knows better than Mr. Liston, is of merely temporary service, I leave to your consideration. The more immediate object of my appeal is to claim your protection as a member of the College, and to seek your opinion on the conduct of Mr. Liston, in going out of his way in the testimonial to make an attack on myself of a nature calculated to do me professional injury, when, as I maintain, and am, with your permission, prepared to prove, it has no foundation whatever.—I have the honour to be, Mr. President and Gentlemen, your very obedient and humble Servant,

JAS. YEARSLEY.

15, Saville-row, March 30, 1842.

"Royal College of Surgeons in London,
March 14, 1842.

"SIR,—The President yesterday laid before the Council of this College your letter of the 30th ultimo, complaining of a certificate given by Mr. Liston to Mr. Hunt. And I am directed to acquaint you that the Council have invariably refused to interfere in disputes between members of the College, and see no reason to depart from their rule upon this occasion.

"I have the honour to be, Sir, your most obedient servant,

"EDMOND BELFOUR."

"JAMES YEARSLEY, Esq., &c. &c."

15, Saville Row, April 16, 1842.

Mr. President and Gentlemen,—I regret that you should have interpreted my complaint as a mere "dispute between two members of the College." I beg distinctly to state that I have no dispute with Mr. Liston. In a testimonial given to an unprofessional man, Mr. Liston chose to reflect upon certain operations which I had originated, denominating them "unwarrantable incisions," and "horrible mutilations." I required an explanation, which was refused me. Apart from this uncourteous conduct I deemed myself injured, and unjustly aspersed, and I arraigned my asperser before you, at the same time inviting inquiry into my own professional conduct, expecting that if I had done aught discreditable to me as a surgeon, or as a member of the College, to meet with your disapprobation.—If I had done right, to meet with the expression of your sympathy under the wrong I suffered. On the other hand, if Mr. Liston had compromised himself, that he should be visited with your censure, and be required to make the *amende* due from one professional man to another.

These are the simple facts. Your not entertaining my appeal leaves me without faith or reliance on that regulation of the College which promises protection to its members, and which led me to seek it at your hands.—I have the honour to remain, Mr. President and Gentlemen, your very obedient and humble Servant,

JAS. YEARSLEY.

To the President and Council, &c.

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—Medico-Chirurgical Review, April, 1842.
"This little Work will be found extremely useful to Students who have received but an imperfect classical education."—Lancet, November 30, 1839.

H. HUGHES, 15, St. Martin's-le-Grand.

WESTMINSTER HOSPITAL MEDICAL

SCHOOL.—The Summer LECTURES on ANATOMY and COMPARATIVE ANATOMY, by Dr. HUNTER, commenced on Monday, May 2, at Eleven a.m., and Eight p.m., respectively, and are in a course of continuance.

Further particulars may be obtained by applying at the Hospital, at the School, or at Dr. Hunter's, 6, Great Queen-street, Westminster. List of Gentlemen who carried off Prizes for excellence in the study of Anatomy, at the termination of this Winter Session, on Saturday last:—

1. Mr. Duncan Macphure, London.
2. Mr. Samuel Probyn, Ponty, Monmouthshire.
3. Mr. Benjamin Longmore, London.
4. Mr. John Welch, Taunton.
5. Mr. Peter Clark, Scotland.

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33, Upper Gower-street, University College.

Sir,—In justice to you, I feel called upon to add my testimony to your preparation of Magnesia, which is, in my opinion, an invaluable acquisition to the profession generally, particularly in cases of gastric derangement, and in catarrh of the bladder and irritable urethra. I have very recently tried it with the most beneficial results in two cases of irritability of the bladder and urethra; I steeped the leaves of buchu and uva ursi in the solution, and found it have a most soothing effect on the parts, arising, as I imagined, from the superior powers of the solution in extracting the medicinal virtues of the leaves, and also of the advantages of the alkali which your Solution of Bi-Carbonate of Magnesia certainly possesses over that of every other preparation. Yours, &c. &c.

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A LECTURE INTRODUCTORY TO A SUMMER COURSE OF DESCRIPTIVE AND PRACTICAL ANATOMY.

By R. HUNTER, M.D., Lecturer on Anatomy and Physiology at Westminster Hospital Medical School. Delivered 2nd May, 1842.

GENTLEMEN,—In this course our object will be to impart (as far as our limited time will permit), correct ideas of the structure of the human body, viewed, 1st, simply as a piece of mechanism, every part of which is complete in itself; and, 2ndly, to investigate this structure as reflecting light on the operations of surgery.

In this course, in other words, we shall, in the first place, confine our attention to a simple description of the different parts of the human body, and, in the second place, show, by the relative bearings which these parts hold to each other, the close, the intimate relationship which exists between anatomy and practical surgery.

Anatomy has frequently, of late, been viewed as a purely insulated science. Some of the continental anatomists have investigated it in this way; but, however much we may concede to them the palm of minuteness, and probably of correctness of description, it must be admitted that their descriptions are dry, tedious, and uninteresting; the soul is not there. These anatomists look not beyond the dead body, whereas the legitimate object of anatomical study is undoubtedly the alleviation and cure of disease, and of disease too as existing in living and sentient structures. No anatomy then that has not a reference to the living body, and to that body as liable to disease, can be turned to any practical advantage.

The study of anatomy may be prosecuted usefully under a twofold aspect, 1st, in relationship to surgery, or to those conditions of the system in which the knife is the principal means of cure; and, 2ndly, in connection with physiology, or with those operations of the animal economy, the knowledge of which constitutes the basis of all sound medical science. In this course our attention will be directed to the investigation of anatomy in the first of these relations.

Descriptive anatomy has to do chiefly with the great outlines of the human body. It is a science, therefore, peculiarly adapted to the junior student, and easily comprehended by him. It is one, too, which forms an introduction to physiological anatomy, which has to do, both with the great outlines and with the minute and intimate structure of all our organs and textures.

The course of anatomy which we purpose to carry on during the summer, in this school, may be said to divide itself even into three parts—1. Descriptive anatomy properly so called; 2ndly, Relative, or surgical anatomy; and, 3rdly, Practical anatomy. I shall make a few remarks on each of these heads:—

1. *Of Descriptive Anatomy.*—Descriptive anatomy is a title synonymous with anatomical description, and is frequently confined to a pure verbal description of the different parts of the

body, without reference either to the functions of the parts, or to their practical bearings in surgery or physic. It cannot be doubted that a correct knowledge of anatomy is of incalculable benefit to every medical man; neither can it be doubted, that if this knowledge be attained, the student may, by the operation of his own mind, turn it to many practical purposes, or deduce from it many practical conclusions. Yet to teach anatomy exclusively in this way, is to strip the science of half its interest, and to impose a burden upon the student, which few can bear. It would lead him into a maze of perplexities, and leave, at the same time, to chance or perseverance, the possibility of extricating himself. We shall, in this course, enter as fully as the time will permit, into descriptive anatomy; but to obviate the objections to which we have just referred, we shall uniformly incorporate with our descriptions, in as short and simple a manner as possible, the uses and functions of the parts, and shall thus prepare the young student for entering more fully into physiological details in future courses of lectures. In descriptive anatomy, we usually commence with the bones, which constitute a frame-work of the system; proceed from these to the muscles, or moving powers; thence to the nerves, which communicate mobility to the muscles, and sensibility to the other textures; thence to the blood-vessels, which circulate the blood, or vital fluid of the system, for the nutrition of every part, and the elimination of the various secretions; and, lastly, we describe, but only in a very general manner, the organs and viscera contained in the head, chest, abdomen, and pelvis. Even the young student will, at once, perceive that this last division includes the most important organs of the body, for in the head he will find the brain and four of the principal organs of sensation—the eye, the ear, the organ of taste, and the organ of smell; in the chest, the heart and lungs; in the abdomen, the digestive apparatus, as the stomach, the intestines, the liver, the spleen, pancreas, &c.; and in the pelvis certain urinary and generative organs. In this course we describe each organ as entirely distinct in itself, or as if unconnected by any physiological relation, and our descriptions consequently can, at best, be of a very general and simple kind. Descriptive anatomy we must view as the groundwork of our investigations into surgical anatomy, and still more into physiological anatomy, which is treated of in all its bearings at a separate course; for it is only when descriptive anatomy is followed up into relative or surgical anatomy, and traced in connection with physiology, that its utility can be discovered, and its importance duly appreciated.

2dly. *Of Relative, or Surgical Anatomy.*—During our descriptions of the blood-vessels, more particularly of the arteries, our attention will naturally be led to this important division of our subject. Relative anatomy cannot properly precede, it must follow descriptive, for it refers to the relative position which the parts in any region of the body bear to each other; and this relationship obviously can neither be understood nor remembered, unless the individual parts which we require to notify, to arrange, to group, or to insulate, have been, in some measure, known to us. It is clear, that a knowledge of the exact situation of every organ and texture of the body must be well known to the surgeon before he can operate, either with credit to himself, or safety to his patient. Till very lately, however, this interesting department of anatomy was unaccountably overlooked; but this reproach was first wiped away by the labours of a renowned citizen of Glasgow—the late Mr. Allan Burns. Since the publication of Mr. Burns' excellent treatise on the surgical anatomy of the head and neck, this department of science has gradually advanced, and we have now, in the elabo-

rate works of Blandin and Velpeau, on this subject, almost everything to be desired.

3rdly. *Of Practical Anatomy.*—The object of this course is not only to lead you into a knowledge of descriptive and surgical anatomy, but also to initiate you into practical anatomy, or to teach you the mode of displaying the structure of the human body by dissection. This is the most important subdivision of the course, and one which must be performed in the dissecting-room. It is not enough that we should show you how to dissect, you must take the knife into your own hands. You must practise the art for days, and weeks, and months, and even years, before you can attain that practical knowledge, and that facility of manipulation which lie at the foundation, and constitute the basis of all good practical surgery. Actual dissection is not only useful in imparting manual dexterity to the operative surgeon, it leads to more important results; it is, indeed, the only mode of attaining a real, a *bona fide* knowledge, if I may so speak, of anatomy. Lectures and demonstrations are, no doubt, very important and useful to a young student, by placing the subject before him, in a variety of lights, and, it may be, in the most attractive forms. But, however highly we may be inclined to estimate lectures, as a means of instruction, it can not for a moment be doubted, that they are only secondary to the practical examination of the subject by the student himself. It always gives me satisfaction to observe a student regular in his attendance upon the lectures and demonstrations, for it shows that the student is desirous of information, and is imbued with a spirit of study which, if cherished, will lead to valuable results. But it affords me still higher pleasure to observe a student keenly and unremittingly prosecuting his practical studies quietly in the dissecting-room, for we have then the strongest evidence that the student is in earnest, and in the sure path of improvement, for he is determined then to rely chiefly upon his own exertions. He opens and peruses for himself the book of nature, and prefers the revelations of that book to the traditions and commentaries of men.

I am happy to say that every facility now exists for the study of practical anatomy. Twenty years ago a tithe of the medical students of the country had it not in their power to dissect, and even these could only obtain this indispensable part of medical knowledge by transgressing the laws of their country, and subjecting themselves to legal penalties. For more than twelve years as a teacher of anatomy I had to deplore this untoward state of things, but fortunately for the profession and public this dark era of our history has passed away; the morning star has arisen, and ushered in the refulgent light of day. We have facilities now which the students of former times longed for in vain. We ought, therefore, to cherish this boon imparted by an enlightened policy with gratitude, and improve the advantages we now enjoy by the assiduous cultivation of this fundamental part of medical knowledge.

There is a method of teaching, as well as learning anatomy, to which I would beg shortly to direct your attention. Anatomy is frequently described as an extremely complicated and difficult science. So far as descriptive and practical anatomy are concerned, this is really not the case. The details are numerous, no doubt, and a multiplicity of facts brought at once before the mind of the young student is apt to confuse and bewilder him. This arises, however, from a want of methodical arrangement. Let these facts be systematically and properly arranged, and the whole will appear simple and easily remembered. The plan which I have found best adapted for the teaching of anatomy, is that which commences with great outlines, first of the whole body, then of subordinate divisions, and even of the individual parts; and after

these great outlines are known, and not till then, to proceed in a systematic manner in following out the details. For example, in commencing a course of descriptive anatomy, I would show that we might arrange all the parts of the body, as usually done, into five great systems—the osseous, the muscular, the nervous, the vascular, and the splanchnological—the first, including the bones and their appendages, the ligaments and cartilages; the second, the muscles and their appendages, the tendons and aponeuroses; the third, the nerves; the fourth, the blood-vessels; and the fifth, the remaining organs and viscera, those contained in the head, chest, abdomen, and pelvis.

After the student has obtained a clear idea of the outlines of these great subdivisions, he would proceed with each subdivision in succession, and commencing with the bones would first make himself acquainted with the great outlines of the skeleton; its primary and secondary subdivisions, and the names of the bones in each subdivision. He would then be prepared to enter upon the examination of the individual bones—first, in a very general manner; and after he has attained this degree of general information, he would then be fitted to undertake a closer and more minute examination of each bone. This plan can be followed with equal facility in the muscles, nerves, blood-vessels, organs, and viscera. If this plan be carefully followed out, more valuable and useful information will both be communicated to the student and retained by him in a given time, than by the method in common use, in which systematic arrangement is too much disregarded, and the facts of anatomy jumbled together into a chaos of confusion.

In prosecuting the study of anatomy, I would say, let your attention be devoted as much as possible, I had almost said, exclusively to the subject. Even books, plates, and models must be used with caution. Some students will read, and read eagerly too, upon anatomy, but they cannot submit to the “drudgery” of dissection. But such students, however fluently they may speak upon anatomy, have no valuable knowledge; they have merely the words, the thing itself is unknown to them. Some again will read and pore over anatomical plates, rather than the subject. These get acquainted with a kind of paper anatomy, but it is not the anatomy of the human body. It will not enable the student to perform any surgical operation, and will hardly even enable him to distinguish one part of the body from another. Casts and models have of late been much introduced, but these, though superior to plates, must be looked upon as imitations and counterfeits, not the genuine coin; and when used at all should be resorted to not to learn the structure, but to refresh the memory, and recall what was formerly seen on the subject itself; and if you would follow my advice, gentlemen, you would eschew all these temptations, and cling to the subject as the only unerring guide in the true paths of genuine anatomy.

I do not say you should not read at all, for a judicious course of reading is indispensably necessary to enable you to follow out with effect the lectures and demonstrations of this or any other class; but what I wish particularly to inculcate is, that reading ought not to supersede the practical examination of the subject by dissection, and that in following out the study of practical anatomy, reading ought to be made secondary or subservient to observation. In studying practical anatomy, the book should be used during the period of dissection, and that book is best adapted for the purpose that merely indicates what is most worthy of being observed—that encourages and stimulates the observation of the student, but does not supersede it.

Besides the small outline of anatomy which I have published for the use of my own class, I would recommend, as the best works on pure descriptive anatomy, Bichat's, Boyer's, or Cloquet's treatises, in all of which you will find both minuteness and correctness of description. Cloquet's work, as the latest, stands probably most worthy of recommendation, and is most suitable to the purely English scholar by the translation which has been given of it by Dr. Knox.

The book best adapted for the dissecting-room is probably the “Dublin Dissector,” written by Dr. Harrison, who has also distinguished himself by an excellent work on the surgical anatomy of the arteries, which is undoubtedly the best compendium of surgical anatomy we possess, and which cannot be too carefully studied by you all.

And now, my friends, after this short exposition of the nature and object of this course, and of the best mode of conducting your practical studies, it only remains for me to exhort you to regularity, industry, and zeal, in the prosecution of your studies. I need not say that I shall expect you to be correct and gentlemanlike in your deportment towards each other—that you will be regular in your attendance upon the class, and in the dissecting-room; and I hope that you will display a generous emulation in all that is praiseworthy, and be distinguished, as hitherto, no less by the propriety of your conduct, than by your progress in study, and the superiority of your anatomical attainments.

COURSE OF CLINICAL LECTURES ON PNEUMONIA.

Delivered at the Hospital La Charité, by Professor CHOMEL.

LECTURE XV.

DIAGNOSIS OF THE SEAT, THE EXTENT, AND THE DEGREE OF ACUTE PNEUMONIA.

1. *Seat and Extent of Pneumonia.*—The modifications which sometimes exist in the lung with respect to the arrangement of its different lobes, may lead the practitioner into some degree of error in the appreciation of the seat of the disease. Thus, the fissura magna being sometimes vertical, the inferior lobe having then become directly posterior, may mount up towards the summit of the thoracic cavity; at other times, on the contrary, the fissura magna is horizontal; so that in inflammation of the superior lobe, the physical signs may be seated very low down, and on the posterior part. This position of the lobes has been several times observed in the old patients at Salpêtrière by MM. Hourmann and Dechambre. The seat of the pneumonia gives rise to some modifications in the symptoms, as we shall see in examining pneumonia of the summit, that of the base, central pneumonia, lobular pneumonia, and double pneumonia.

A. *Pneumonia of the Summit.*—In this case we usually find all the physical signs of pneumonia; crepitation, bronchial respiration, bronchophony, and dulness on percussion; the pain is sometimes situated about the nipple, or at least it is not necessarily fixed to the sub-clavicular region or the summit of the armpit, as the seat of the inflammation would induce one to believe; this is an observation which P. Frank has made in a great number of cases. In inflammation of the summit, the dyspnoea is greater than in that of the base; this difference may perhaps be attributable to the circumstance that respiration is most frequently performed by the cells of the upper part of the lung, while those of the lower part of the organ scarcely experience any dilatation. But when the summit of the organ is attacked, the cells of the base take on an increased action; they, however, dilate with great difficulty, and only with considerable efforts on the part of the patient. Expectoration seems to be more frequently absent in pneumonia of the summit than in that of the base. The cheeks have also, according to M. Bouillaud, a deeper flush in pneumonia of the summit; and delirium more frequently accompanies inflammation of this part than when the disease is seated elsewhere.

B. *Pneumonia of the Base.*—In addition to what I have just said, while comparing pneumonia of the summit with that of the base, I may add, that in hepatization of the inferior lobe of the right lung, it becomes very difficult to distinguish by percussion the line of separation between the lung and the liver, unless there exist some resonant points of the lung between its hepatized portion and the liver; the diagnosis will then be perfectly easy.

C. *Central Pneumonia.*—The name of central

or deep pneumonia is given to that inflammation which is limited either to the centre or mediastinal region of the lung, and which does not extend to the costal surface of this organ. This form is very rare; and, when it does exist at the commencement of the malady, it is quickly transformed into ordinary pneumonia, the inflammation extending from the centre to the circumference of the organ; thus we rarely find it in post-mortem examinations. Central pneumonia does not differ from superficial pneumonia in respect to dyspnoea, expectoration, and the degree of fever, but it differs in the greater number of cases by the want of pain, by the absence of dulness on percussion, and by auscultation discovering neither crepitation nor bronchial respiration. These phenomena are hidden by the natural murmur of the respiration; and the following assertion of Laënnec does not seem to be borne out by modern observations:—“When the pneumonia is central and has not passed beyond its first stage, we hear, deeply seated, the crepitant râle, and, superficially, the natural respiratory bruit, and sometimes even puerile respiration. If the inflammation has reached its second stage, we hear bronchial respiration in the deeper parts, while in the points nearest to the ear, we distinguish only the bruit of inspiration. Lastly, when the inflammation extends itself and approaches the surface of the lung, we perceive the respiratory bruit at each examination to become more superficial, and the crepitant râle or bronchial respiration to approach day by day the thoracic parietes, and finally to present themselves at a point which, at their first appearance, might be covered with the finger.” According to some authors, however, we might suspect the existence of this form of pneumonia from the presence of the clear bruit which is heard over the whole of the remaining sound tissue which surrounds the hepatized portion: this clear bruit appears to result from the combination of the bruits furnished by the hepatized part with those produced by the sound portion of the lung. Exaggerated or puerile respiration, when heard in some particular region of the lung, should lead us to suspect the existence in its neighbourhood of some impermeable portion of tissue, the inflammatory lesion of which will be revealed by other symptoms. According to M. Piorry, percussion would, in these cases, when practised with sufficient force, be of considerable service as a means of diagnosis.

D. *Lobular or Disseminated Pneumonia* is that which invades simultaneously several points of but very small extent in the lung. This form is rare in the adult, and very frequent among children. In general, it is difficult of diagnosis, and its existence is frequently revealed by the autopsy alone. The chest preserves its natural sonorousness on percussion. The respiratory bruit is heard over the whole lung; but, on making auscultation over a great number of points, we distinguish in some a crepitant râle, limited to a very small space, around which the respiration is sometimes puerile. Pain in the side is most commonly wanting, and the sputa are scarcely ever *pneumonic*; they most frequently resemble those of simple pulmonary catarrh.

E. *Double Pneumonia.*—Double pneumonia is generally remarkable for the extreme degree of dyspnoea which it occasions, and for the great alteration of the features. The pain is frequently limited to one side, a circumstance which might remove attention from the opposite one. In these cases the most careful percussion is requisite, for in double pneumonia the sonorousness of the chest appears equal on both sides, and this circumstance throws a doubt over the signs furnished by this mode of exploration; but auscultation will remove all cause of error, by showing the feebleness of the respiratory murmur compared to its often exaggerated intensity in those parts which remain sound, as well as the existence of crepitation, bronchial respiration, and bronchophony; and as, also, it is exceedingly rare to find the inflammation equally advanced in both lungs, the difference discovered by auscultation in the sonorous phenomena will prevent our confounding this diseased condition with the natural state, at least as far as relates to bronchial respiration and resonance of the voice.

II. *Diagnosis of the degree of Pneumonia.*—

The first stage of pneumonia is announced by crepitant râle, and the sputa are frequently characteristic at this early period; dyspnoea, pain in the side, cough and fever, are also combined with these symptoms. In the second stage, we find bronchial respiration, bronchophony, and the pneumonic sputa. With respect to the third stage, we have yet no certain criterion of its existence notwithstanding the assertions of the early physicians, who imagined that they possessed the means of recognising the different periods when suppuration was about to take place, when it had commenced, and when thoroughly established. P. Frank, for instance, expresses himself in the following terms:—"We commonly, but not invariably, find the supervention of symptoms which announce the approaching formation of abscess, or even the presence of pus. If the inflammation remain intense, the cough dry, and the dyspnoea urgent, notwithstanding the employment of blood-letting; if the cachectic constitution of the patient retard a favourable termination; if the pain become lessened whilst the constriction of the respiration as well as the fever continue along with the absence of expectoration and without the presence of a puriform sediment in the urine; if we find an exacerbation after meals and exercise, a slight horripilation about mid-day, followed by an abundant perspiration bathing the head and chest; if, at intervals, a shooting pain seems to run through the chest, we may then apprehend the commencement of the suppurative stage. Still, under such circumstances, and especially in rheumatic peripneumonia, I remember," says P. Frank, "having more than once seen my apprehensions of this grave termination dissipated by the resolution of the disease." Suppuration, when formed in the lung or in the thoracic parietes, is recognised by the continuance of the symptoms just mentioned, and by the following phenomena:—frequent pulse, exacerbation at night characterized by slight shivering, redness of the cheeks, a burning heat in the palm of the hands, frequent and difficult respiration, œdema of the feet, and a remission in the morning manifested by the appearance of copious perspirations. The patient becomes greatly reduced notwithstanding the continuance of the appetite, there is continual thirst, a sensation of weight in the part where the pain was originally situated, and a difficulty in lying down in the recumbent posture. According to Cullen, when the pneumonia is accompanied by symptoms which are neither very violent nor very moderate, and which have continued several days, there is reason to fear the occurrence of suppuration. If a moderate inflammation, in spite of suitable remedies, become prolonged beyond the 14th day without some manifest remission, we may then with considerable certainty pronounce the existence of suppuration; but we shall be still more positive if there appear no sign of resolution, or if the expectoration cease after being for some time manifested, and if the difficulty of respiration continue or increase, although the other symptoms diminish. We may conclude that suppuration has commenced when the patient is frequently affected with slight shiverings, accompanied with a sensation of cold, sometimes in one part and sometimes in another. The pulse is then usually less frequent and more compressible, but sometimes it becomes quicker and fuller than before. Bosquillon adds, that when suppuration is formed, there are still nocturnal sweats, the urine deposits a furfuraceous sediment, the tongue becomes cleaner, the conjunctiva and sclerotica grow clearer, the patient can only lie on the affected side, and, according to Boerhaave, the pus formed in the lungs may become effused upon other parts. We may, says Cullen, conclude that suppuration is perfectly formed when the pain diminishes greatly, although the cough, and especially the dyspnoea, continue, and even increase; when the pulse continues frequent, with considerable exacerbations at night, and the gradual formation of hectic fever.

But recent observation has shown that these signs do not possess the value which the ancients assigned to them. In addition to the considerations drawn from the progress and duration of the affection, we are enabled at the present day to aid

our diagnosis by means of the signs furnished by auscultation and percussion. Among the phenomena which appear in the third stage of pneumonia, some authors had pointed out a kind of *mucous râle*; but as they had not carefully indicated its characters, and especially as they had not noted under these circumstances the absence of all bronchial complication, this character had not been considered of great value till M. Fournet brought to light some facts which tend to endow it with great importance. A patient, he says, died very rapidly of pneumonia; all the usual symptoms appeared in succession; the disease passed to the third stage, and then there was heard opposite the part of the lung where, on the autopsy, we discovered diffuse suppuration, but without any trace of abscess or of cavities, a *mucous râle with large and humid bubbles*, a peculiar character of which was that it occurred only during inspiration. M. Fournet states that he afterwards had an opportunity of noticing a similar fact in another patient, and he adds that the entire absence of all catarrhal complication, in the cases which he cites, give great value to these facts by removing all idea of this being a simple mucous râle. We also know that the mucous râle of bronchitis is heard during expiration as well as inspiration. Further observations are required to be enabled to decide upon the value of this symptom, which co-existed only with inspiration, and which was developed towards the period that the purulent matter passed from a concrete to a fluid state, and when the disease was in an increasing or at least in a stationary condition. In the child, where bronchitis is most usually complicated with pneumonia, the mucous râle, from its extreme frequency, is of much less importance.

The sputa furnish some useful tokens in the consideration of this question. The matter resembling the juice of prunes is not always expectorated, it is true, in the third stage of every case of pneumonia; but when it supervenes at an advanced period of the affection, when it succeeds to viscous, transparent, and rusty-coloured sputa, it is a tolerably sure indication of the disease having passed to the stage of suppuration. The combination of the various circumstances which I have just pointed out is necessary to give some degree of certainty to this point of diagnosis; for the matter resembling juice of prunes, which may be expectorated as soon as the second day of the disease, cases of which I have several times seen, cannot be indicative of suppuration which has not had time to form itself; sometimes, also, this kind of expectoration takes place for a short time only, and then assumes the characters common to the first or second stage of the disease. It would be important to distinguish in the sputa the puriform mucus from pus itself; but unfortunately the efforts made up to the present time have not been successful in establishing the precise differential characters of these two matters. It is not unimportant to point out here the change which often supervenes in the colour of the face, which from red and animated, becomes, during suppuration, of a yellowish white, and presents some analogy with that observed in cancerous diseases. Lastly, we often find, at the period of suppuration of the lung, a state resembling that which is observed in cases of purulent absorption; the blood drawn from the vein presents a loose coagulum, a depression of the vital powers supervenes, together with a low muttering form of delirium, &c. But, notwithstanding the combination of these various symptoms, as well as the information furnished by the progress and duration of the disease, we are still obliged to acknowledge that, in the present state of science, it is impossible to affirm that pneumonia has passed from the state of red hepatization to that of diffuse suppuration.

III. *Abscess of the Lung.*—When, at an advanced period of pneumonia, we hear at the moment of inspiration, and especially after cough, in some point corresponding to the seat of the disease, and in a circumscribed space, a cavernous rhonchus, with gargouillement, the puffing respiration and pectoriloquy; when after a more or less abundant expectoration of puriform matter, the sound, from dull, becomes tympanitic and the

respiration amphoric; when the cavern, containing both air and liquid, yields on percussion the humid bruit, a bruit analogous to that obtained by striking the clasped hands lightly against the knee, or when again, under these circumstances, we find on succussion a *bruit de flot*, we shall be induced to believe in the existence of a purulent cavity at this point; though even this we cannot positively affirm, for some of these signs belong equally to other lesions, tuberculous cavities, for instance, and even to some forms of bronchial dilatation. But in the tuberculous cavern, it is especially at the summit of the lung that we observe the signs of the excavation; pectoriloquy and the puffing or cavernous respiration are also in this case more intense and more exactly circumscribed; and lastly, the previous history as well as the progress of the disease, the general symptoms which accompany it and which constitute a form of hectic fever, will contribute powerfully to establish a distinction between these two lesions.

On the other hand, bronchial dilatations may simulate the disseminated abscesses of the lung. Thus, M. Mercier relates the case of an old man who was attacked with well-marked pneumonia. The sputa, from rusty-coloured, became white, puriform, and very abundant; the dulness on percussion gave place to very great sonorosity, and manifest gargouillement succeeded a crepitant râle. The strength of the patient, instead of returning, became more and more depressed, and at the end of two or three months the patient died of exhaustion. Instead of abscesses, which were expected to be found, it was discovered that the pulmonary parenchyma had returned to its normal condition; but all the bronchi of the inferior lobe were widely dilated and filled with a matter similar to that of the expectoration.

PATHOLOGY.

General View of the various Pathological Schools.

The Dogmatic School.—*Opinions of Hippocrates—Erasistratus—Eudoxus—Erophilus—The Harmonic Numbers—Demoniacal Pathology, &c.*

THE ancient philosophers entertained a belief that force and matter possessed a distinct, independent existence. They considered that matter was perfectly inert in its essence, and that all the modifications which it underwent, proceeded from the extraneous impulses of an immaterial force, a controlling power which generated all the physical phenomena of change and motion in the universe. This opinion was embraced by physiologists, and continued during many centuries to form under different names the ground-work of some of the most celebrated doctrines in pathology and therapeutics. It would be an infinite task to trace out all the shades and distinctions of medical sectarianism from the origin of the science down till the present time; we may see, however, from a glance over the history of medicine, that the principal pathological schools may be classified under six grand divisions:—*The Dogmatical, the Chemical, the Mechanical, the Empirical, the Vital, and the Syncretical.*

I. *THE DOGMATICAL SCHOOL OF PATHOLOGY.*—The founder of this school was Hippocrates, who considered that the living body was composed of four elements, *blood, phlegm, bile, and atrabile*, and that the admixture and temperament of these elements were regulated by a peculiar immaterial principle, which sometimes he called *physis*, and at other times *innate fire*. The material elements, both in their healthy and morbid condition, were purely passive, and depended entirely upon the notions impressed upon them by the immaterial *physis*, which was supposed to be endowed with reason and intelligence, and to be intrusted with the important office of preserving life and health. Disease, then, arose not from any fault in the material principles of the body, but either from the weakness or mismanagement of the *intellectual fire*, and therefore the indication of cure consisted in strengthening or directing this fire, so as to enable it to regain a normal ascendancy over the perturbed economy.

This is what Hippocrates meant by seconding the efforts of nature (*physis*), but it is evident that his notions of nature were very different from those entertained by physiologists of the present day. A similar dogma respecting an immaterial principle in the body was entertained by many of the followers of Hippocrates under the name of *pneuma* (spirit), and especially by Erasistratus, who said that the *pneuma* was of two kinds, viz., *vital air*, acting upon the heart, and *animal air*, acting upon the brain. He admitted four qualitative elements in the body, *hot, cold, moist, and dry*, the proper or improper admixture of which under the control of the *pneuma* gave rise to health or disease. The peripatetic philosophers believed that certain *native principles* were infused throughout the material universe, and that these were the cause of all the various phenomena which fell within the sphere of our observation. This dogma was introduced into medicine by Erophilus, who attributed all the vital functions of the body to one of these active principles under the name of the *soul*. The Essenians of Alexandria considered that all the operations in the living body were carried on under the influence of demons, and that maladies resulted from the anarchy or misrule of these supernatural intelligences. The indication of cure consisted, therefore, in endeavouring to make the demons act according to the normal laws of the constitution, which was effected by the administration of amulets, talismans, &c. It is evident that this demoniacal pathology was in vogue among the ancient Jews, since in scripture a reference is frequently made to the necessity of disembarassing certain unfortunate patients of a superabundance of devils. The monkish physicians of the middle ages entertained pretty nearly the same idea, and their method of cure consisted in counteracting the morbid influence of infernal spirits by the more potent influence of saints, orisons, and penance. Anaxagoras thought that all bodies were made of *water, earth, and fire*; but Basil Valentine and Isaac Holland believed that all things resulted from a mixture of *salt, sulphur, and mercury*. Paracelsus concurred in this latter opinion, but he thought that the salt, sulphur, and mercury, which entered into the composition of the living body, were of a *sidereal* nature. He thought, moreover, that the compound resulting from these sidereal elements was under the immediate direction and surveillance of a peculiar immaterial being to which he gave the name of *Archeus*, and whose abode was about the pyloric orifice of the stomach. Van-Helmont, also, believed in the existence of the *Archeus*, but he admitted only two elements, *air and water*, into the composition of the body, and taught that out of these ingredients all organic substances are engendered by the *Archeus* by a process of fermentation. The *Archeus* was invested with all the attributes of mind and animal passions; he was a kind of demoniacal alchemist, whose more especial office was to preside in the laboratory of the stomach, and to see that the function of digestion was properly executed. Maladies were considered as resulting from certain aberrations in the thoughts or passions of the *Archeus*, such as mania, grief, anger, &c., and the indication of cure consisted in correcting the perversion of this imaginary phantom. According to Ernest Stahl, all matter is inert, and derives its various accidents of change and motion from immaterial substances; one of these substances, the *anima*, regulates the living body. This seems to have been almost perfectly identical with the *physis* of Hippocrates, and was likewise endowed with foresight and intelligence. Maladies were thought to consist in *irregular ideas* of the *anima*, and the symptoms of these maladies were the visible efforts made by the *anima* to correct its own mental irregularities and hallucinations. It was the duty of the physician, therefore, never to contravene these salutary efforts, but rather to favour them by every means in his power. This doctrine of increasing instead of opposing morbid symptoms, seems to afford a slight intimation of homœopathic pathology. Eudoxus of Cnidus, imagined that all the phenomena of the universe were subject to the laws of harmonic numbers, and that maladies were caused by certain incommen-

surable relations, arising between the particular numbers which presided over the living economy. In like manner, a sect of natural philosophers sprang up in Germany, who asserted that all things result from the agency of *secret forces*; one of these *secret forces* was made to preside over the phenomena of life and health. Hence the influence of the stars and planets in the treatment of disease by astrological physicians. After this brief sketch, we may conclude, in the first place, that all these fantastical absurdities, the *innate fire*, or *physis* of Hippocrates, the *pneuma* of Erasistratus, the *active principle* of Erophilus, the *numbers* of Eudoxus, the *demons* of the Essenians, the *evil spirits* of the monks, the *Archeus* of Paracelsus and Van-Helmont, the *anima* of Stahl, the *secret forces* of the astrological philosophers, were only so many different expressions to signify the same unknown force or principle which was supposed to exist independently of matter, and to be endowed with a power to exercise a specific control over the kingdom of vitality. We may affirm, in the second place, that these various pathological systems were mere affiliations of the reigning schools of philosophy. Hippocrates borrowed his *empyreal physis* from the activity assigned to fire by Pythagorus, Heraclitus, Plato, &c., and his four humoral elements were derived from the doctrine of Empedocles. Erasistratus borrowed his *pneuma* from the doctrines of Anaxagoras, Heraclitus, and Democritus. Eudoxus borrowed his *harmonic numbers* from the Pythagoreans. Erophilus borrowed his *soul* from the Aristotelians, who gave to their *active principles* a difference of form, faculties, &c. The Essenians received their *demons* from the oriental superstitions, and the monkish pathologists fabricated their *evil spirits* from the dreams of ignorance and necromantic fantasies. The astrological physicians derived their *secret force* from the vagaries of the times; and Stahl appears to have derived his *anima* from the Cartesian doctrine of an universal æther, while Paracelsus and Van-Helmont concocted their *Archeus* from the hypothesis of the alchemists; the reigning medical theories, in fact, have been invariably based upon the reigning philosophical theories of the particular age or country in which they flourished—a truth which I shall further illustrate in my account of the remaining schools of pathology.

CAMBRENSIS.

ON THE EXHIBITION OF INSPISSATED OX-GALL IN VARIOUS DISEASES.

By CHARLES CLAY, Member of the Royal College of Physicians, London, &c., &c., Lecturer on Medical Jurisprudence, &c., Manchester.

I HAVE had my attention for some time directed to this somewhat novel article of the materia medica, with a view to ascertain its powers as a medical agent, to what cases it appeared most applicable, and the best method of administering it. Gall of animals is by no means a new remedy, for I find its use spoken of by Boerhaave, and since his time by various writers; full justice, however, has not been done to its merits, it only having been tried in isolated cases, no one taking the trouble to test its powers by frequent experiments either on the same or different diseases. Boerhaave relates, "that he has cured pale rickety children by pills made of the galls of the eel and the pike; that the medicine operated powerfully by urine; and that by its use the belly, before swelled, subsided surprisingly." Lewis, in his materia medica, says, "in want of appetite and other complaints proceeding from a deficiency of bile in the first passages, this animal bitter may probably be of more service than those of the vegetable kingdom usually directed in such intentions." As an external application, ox-gall, combined with the camphoretted spirit of wine, has been often spoken of in rheumatism, sprains, and bruises. From experiments made upon gall by Cartheuser, Baglivi, and others, it was found to be very soluble in water,

sparingly acted upon by rectified spirits, rendering oily, unctuous, or resinous substances, miscible with water; it has the peculiar property of preserving milk from coagulating, or turning sour, or when coagulated immediately dissolves it again; this last property deserves particular notice, and to which I intend to allude afterwards. So far as experiments have been instituted on the gall of animals, there does not appear to be any great difference in its composition, and as the gall of the ox is much easier to be obtained in large quantities, I have selected it as the object of the following experiments:—Dr. Peacock, of Darlington, remarked (Lancet, vol. 1, 1836-7, page 398), that he had observed in a case of schirrous or cancerous ulcer of the breast, that when the system exhibited an accumulation of bile, the pains accompanying such diseases (cancerous) were very greatly alleviated. In the case from which he drew this inference, during the progress of the disease, the patient was frequently attacked by the symptoms of jaundice, and invariably when the white motions and yellow skin appeared, there was almost entire relief from pain. Although Dr. Peacock exhibited gall in other cases, he does not give any decided opinion upon it, but augurs favourably and wishes its being further tested by others. Having some cases analogous, I determined on giving it a trial in such affections, before I proceeded to its trial in other diseases, towards the cure of which I fancied its powers more applicable.

CASE 1.—Anne H—ly, æt. 56, had a cancerous ulcer that had destroyed the greater portion of the nostrils, accompanied with the most violent lancinating pains, over which neither local applications nor internal medicines (except for a very brief space of time) had any control; the case had been long under treatment without improvement, and as a forlorn hope, I ordered the following:—

R. Fel. bov. inspiss., ʒij;

Ol. carui, m. x.;

Magnes. carbonatis q.s. ut fiat massa. M.

Div. in pilulas xxxvi., capiat ij ter in die. In order that the effect might not be combined with any other object, no local application beyond clean washing was recommended. After taking the pills for only one day great relief from pain was experienced; on the fourth day no trace of pain remained; for three weeks the sore improved in appearance, without pain; slight pains again occurred. The dose was ordered to be repeated four times in the day. The pains again subsided, and all progressed well for two weeks longer, when the pains again occurred. Pills ordered, two repeated six times in twenty-four hours, after which the pains slightly abated, but soon recurred again. Eight weeks after the commencement the sore began to assume its old character, and the pain became violent; she soon after left the dispensary, and I lost sight of the ultimate result. Before giving the gall in this case, the motions were particularly white, and the bowels very much constipated, with acid risings from the stomach, all of which vanished whilst under the influence of this medicine.

CASE 2.—Hugh C—lt—on, æt. 64, of Manchester, had a schirrous ulcer of the right mamma produced by an injury. Some years before a large fungus had been removed from the part by myself, but the ulcer remained without any disposition to close, sharp shooting pains extending to the right armpit, with an extensive and disagreeable discharge; appetite generally very deficient; bowels very torpid, and when moved by purgatives became immediately torpid again; his motions were particularly white. The treatment of this case had been various; some relief from pain, and a

better disposition to heal, with less discharge from the sore, was observed (for a short time only) by the application of the pulveris ferri carbonatis in the form of ointment, and the occasional exhibition of the pil. hydrargyri. c. opio internally. On giving the inspissated ox-gall to the extent of twenty grains in the day, according to the formula in case 1, a decided relief from pain took place, the sore put on a healthy appearance, his nights (before restless) were comfortable, and the discharge from the sore of a less offensive character. About a fortnight after taking the inspissated gall the pains returned; I increased the quantity to thirty grains in the day, when he again experienced the same relief; he has now taken it nearly three months, occasionally omitting it for a few days; the sore is very nearly healed, his general health very much improved, and his bowels very regular.

CASE 3.—Mrs. J.—son, Ancoats, Manchester, æt. 70, with an extensive cancerous destruction of the whole left labium pudendi, extending rapidly to the mons veneris and the glands of the left groin; no local application or internal medicine gave the least relief, except large doses of the mur. morphiæ, and then of the most temporary character, seldom producing more than a single hour's sleep at a time. In a case so utterly hopeless, I had not the least expectation of giving more relief (if as much as had already been obtained by the mur. morphiæ). The digestive powers were almost defunct, the stomach rejecting the greater portion of food, and what was retained produced violent pain; the bowels, which were extremely torpid, seldom evacuated, and then the motions were of a chalky nature. I ordered her thirty grains of the inspissated gall per diem. Calling upon her the day after she commenced taking it, I found she had enjoyed more rest, and had been more free from pain than for many months past. After taking it six weeks the pains were becoming violent again, and the dose was increased to forty grains per diem, which dose she now takes. It gives more relief than any other remedy, in consequence of which she sleeps better, her bowels are more regular, and the ulcerous discharge less offensive; but the work of destruction still progresses rapidly, and evidently to a fatal termination.

Observations on the above.—It is evident, then, that the inspissated gall is but a palliative in cases where schirrous or cancerous diseases have assumed a malignant form; but even under such circumstances it is a valuable acquisition to the means of giving relief, though temporary; and it is probable, that if exhibited in such diseases at a much earlier period, the relief might be more certain—nay, a cure might possibly be effected. Dr. Peacock mentions the decided character of the motions (*being white*); the same appearances with obstinate constipation and deranged digestion were observed in each of the above cases. On turning over numerous authorities, I find the same sluggish tendency of the bowels, with indigestion, generally mentioned by all, which, in my opinion, goes far to prove that all schirrous affections arise from a want of sufficient secretion of healthy bile; or, in other words, that where there is a deficiency of bilious secretion, there is a tendency to disease, and ultimate lesion of continuity in some structures facilitated by previous injury—thus, the granular structure is often the seat of such affections; hence the mammæ of females are very liable. of this theory be a correct one, no better means can reasonably present itself for relief than by supplying the system with that of which it has hitherto been deficient. The effect produced in the above cases strengthens my opinion of its usefulness in cases more immediately connected

with the alimentary canal, which I shall now proceed to illustrate.

CASE 4.—I was myself labouring under dyspepsia, almost every kind of food became acid soon after being taken; I had violent headaches, constant pain in the epigastric region, and bowels very much constipated, many times three or four days without a motion; occasional relief, but of a very temporary nature, was obtained by the pilulæ hydrargyri. Having been subject to these symptoms, more or less, for seven or eight years, but which have been often very severe during the last three or four years. Purgative medicines always produced great irritation and uneasiness for some time after their exhibition. Under these circumstances I took two four-grain pills of the inspissated ox-gall, not having had any motion for nearly four days; the pills were taken at four o'clock in the afternoon, and at seven, without even the slightest sensation of pain, or the common feelings arising from having taken purgatives, I had a free and copious motion, the excrementitious mass being in a pulpy form, and perfectly free from the indurated character I had been so long accustomed to. I repeated the dose next day with similar results. I experienced not even the slightest feeling of uneasiness; indeed, had I not known the fact, I should not have supposed that I had taken medicine of any kind. The acidity immediately left my stomach, and when under its influence the pains in my head and stomach were removed, and my bowels are now quite regular. From taking occasional doses, of course its effects are not sufficiently tested; but I have experienced more relief, with less unpleasantness, than from any other of the many means I have ever resorted to; in fact, its value in dyspeptic stomachs is incalculable.

CASE 5.—Mrs. W—g, the wife of a painter, thirty-eight years of age, and mother of five children, had been subject to a very constipated habit from a very early period of her life, not unfrequently the space between evacuations extending twelve or fourteen days, and very commonly to ten days, whether pregnant or not, the same tendency to constipation existed: she had sought advice from medical men of the highest repute and experience, but at most only received temporary relief, her bowels almost immediately relapsed into their accustomed state, in spite of the best efforts to the contrary. In the endeavour to procure motions, she had frequently taken from ten to twelve ounces of the ol. ricini, and twenty or thirty drastic purgative pills before an operation could be procured, and then with great pain in the bowels, vomiting, &c., only parting with small balls of indurated fæces. Before giving the inspissated gall, I thought it advisable to test the obstinacy of the bowels by other means, and therefore ordered the following mixture:—

R. Alb. ovi. f. ʒj.
Olei ricini f. ʒij.
Olei menthæ, pip.
Olei crotoni, aa. m. iij.
Aqua puræ f. ʒvi. M.

Sumat æger cochlearia duo magna quaque tertiâ horâ.

After persevering two days with this, only one small motion was passed, and that with violent vomiting, and almost intolerable pain, the fæces having the character of hard balls. Waiting two or three days for the excitement to subside I then ordered the inspissated gall, according to the formula in case 1, giving two four-grain pills three times a day, or twenty-four grains in the day; in little more than six hours from the first dose, and before taking the third, she had a very copious motion, without the slightest degree of sickness or pain, except for a few moments,

caused by the hardened fæces passing the sphincter ani; on the second day a second, and a third motion, as easy as the first, were passed, when I extended the intervals between the doses of the pills to six hours, viz., sixteen grains per diem: from this time her bowels were perfectly regular, and without the slightest uneasiness. Three weeks from the commencement of taking the inspissated gall, she omitted the pills entirely for three days, when the bowels were disposed to assume their former state; resuming the pills once in the day she became quite regular. It is now eight months since the first trial with the gall, and having left off the pills entirely for the last two months, she is quite regular in her bowels. The effects of the inspissated gall in this case were decided, and highly satisfactory. A more obstinate case, showing a more favourable result, could scarcely be adduced.

(To be continued in our next number.)

MEETINGS OF SOCIETIES.

PHRENOLOGICAL SOCIETY. — December 18th, a lecture was delivered by Mr. Logan, upon the animal faculties.—January 3rd, there was no meeting.—9th, a lecture was delivered by Mr. Symes, upon the moral qualities.—17th, the Rev. David Wood, M.A., was elected an ordinary member; Mr. Prideaux, of Southampton, was elected a corresponding member. The President rose and said, that he had hitherto carefully abstained from introducing the subject of mesmerism at the meetings, on account of the prejudices existing against it, being desirous to avoid anything that might create a difference in the Society; although fully aware of the connexion between mesmerism and phrenology, seeing that mesmerism related to the whole of the nervous system, and phrenology to the most important part of it. But, he added, that circumstances were said recently to have transpired, which showed that mesmerism would confirm and extend phrenology, just as phrenology explains some of the mental facts of mesmerism; and that he felt himself therefore obliged to make a mesmeric communication to the society. This he did with the less delicacy, because the Society for the Diffusion of Useful Knowledge, with Lord Brougham, the president of University College, at its head, and some of his late colleagues at University College, who had so violently opposed him and mesmerism, on the Committee, had now borne public testimony to the reality of mesmerism, in the article on somnambulism in the last monthly number of the Penny Cyclopædia, and, curiously enough, to precisely the same extent to which he had admitted it in his work on human physiology. He then read various extracts from the Penny Cyclopædia, in which the facts are boldly admitted—that one person can influence another in many respects, without the consciousness, and even against the will of the patient,—that one person can thus send another to sleep, and awaken him at pleasure, during which sleep the patient may say and do many things, and be variously influenced, and then be awakened at pleasure, without knowing anything that had happened in the mesmeric state,—that patients may be rendered insensible to pain, even to that of severe surgical operations,—a celebrated instance of removal of the breast by Cloquet, of Paris, being fully detailed in the Cyclopædia, as a genuine illustration that patients may have prescience of different symptoms and changes that will occur in the course of their own disease,—that various faculties might be transferred from their usual and appropriate organs to other parts,—that vision, if

it may be so called, may occur by other parts than the eyes; for instance, by the epigastrium or forehead,—

He said that in the course of the last month he had received a series of newspapers from America, containing details of cases in mesmerism, in which individual cerebral or mental organs, as of tune, language, &c., were said to have been excited and stupified at pleasure, just as we can the nerves of other parts of the body. He then read extracts from these papers, containing accounts of experiments performed at Louisville, by Mr. La Roy, Sunderland, and afterwards by Dr. Buchanan, and lastly by Dr. Collyer. While these things were proceeding in America, experiments with precisely the same results had been carried on in different parts of England, by gentlemen who knew nothing of the transatlantic experiments, or of those of each other. Dr. Elliotson had sent the extracts from the American papers to Mr. Prideaux, of Southampton, requesting him to forward them to Dr. Engledue, of Portsmouth, and through him to Mr. Gardiner, of Roche Court, the eldest son of Sir James Gardiner, Bart., an old member of the Society. It happened most curiously that Dr. Engledue received the extracts while leaving home to join Mr. Mansfield, of Clare Hall, Cambridge, and Mr. Case, surgeon at Fareham, a little party assembled for the purpose of hearing Mr. Gardiner read an account of his discoveries in phrenological mesmerism, and had no time to open the packet, which he put in his pocket. After Mr. Gardiner's detail was finished, Dr. Engledue took out the packet, saying, that he had a letter from Mr. Prideaux, which he supposed related to mesmerism: and to the utter astonishment of all present, American extracts were found in the envelope, containing discoveries just such as they had heard with surprise from Mr. Gardiner. A more singular circumstance, perhaps, never happened. The president proceeded to read reports of a number of Mr. Gardiner's experiments, as detailed in the Hampshire Telegraph, in which that gentleman declared he had successively excited and paralyzed the organs of secretiveness, alimentiveness, time, tune, self esteem, colour, locality, constructiveness, destructiveness, wit, &c., at will.

He then read a letter, written at his request by Mr. Atkinson, of Upper Gloucester Place, relating similar experiments by this gentleman, of which Mr. Atkinson promised to furnish the details at the ensuing meeting.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—April 26, 1842, Dr. Merriman in the Chair. *A Case of Dislocation of the Knee, with Observations.* By Holmes Coote, M.R.C.S. The object of the author in the relation of the case here presented, and the observations which follow it, is to insist upon the practical inference, that in dislocation of the tibia forwards (or of the femur backwards) the injury to the ligaments, and other soft parts about the knee-joint, is not necessarily such as to render the recovery of the limb in a perfectly useful state a forlorn hope, as it has been represented by writers of high authority, some of whom have almost regarded amputation as *prima facie* necessary to save the life of the patient. Boyer, among others, observes, that "complete dislocations are rare, because the surface of the condyles of the femur is of so great extent, that, necessarily, ligaments, tendons, and all other soft parts, would be enormously torn; a circumstance that could not happen, unless the power producing the accident acted with extreme force," &c. Delpech speaks of these accidents in the same tone, as very serious in the degree of laceration which must attend them,

but is disposed to recommend caution in adopting the conclusion of some other writers, that amputation of the limb is necessary. In the case related by the author, the reduction was easily effected, and the injury of the soft parts must have been slight, as the patient was on his legs, and able to run, in sixteen days. He enters at some length into the anatomical examination of the ligaments of the joint, for the purpose of showing that dislocation may take place without any material laceration of them. Some interesting remarks follow on the time required for the re-union of lacerated tendons and ligaments, partly founded on observations of the progress of cases in which the former have been divided on account of distortions; and the paper concludes with some considerations on the treatment applicable to distortions of the knee.

A Case of Fungus Hæmatodes. By S.W.J. Merriman, M.D., Physician to the Westminster General Dispensary, Gerrard Street, Soho.—A delicate boy, seven years old, suffered for some months from debility, and anomalous rheumatic pains. Two very painful tumours were then observed, one arising from the occiput, the other from the forehead; constant pressure on these tumours tended to diminish the pains; the tumours grew rapidly in size, spreading in various directions, by which the left eye was nearly thrust out of the socket; œdema supervened in the lower extremities, and death ensued in about ten weeks from the appearance of the tumours. The post-mortem examination showed these to be of a medullary nature, arising from the diploë; the internal table of the skull was scarcely at all affected, but the external was thickened, and covered, wherever the tumours had spread, with bony spiculæ shooting up into the morbid growth. Some of the ribs were also affected with the same disease, and many axillary, lumbar, and inguinal glands were converted into a similar bloody, brain-like substance, but, generally speaking, the viscera were healthy. In conclusion, the author notices the boy's mother, who has nearly lost the use of her wrist and knee-joints by a species of chronic rheumatism, acting in a peculiar manner, and producing no distortion.

A Case of Congenital Cataract, where sight was acquired by couching at the age of twenty-three years. By R. A. Stafford, Surgeon to the St. Marylebone Infirmary.—The disease in the case here related was of the capsulo-lenticular variety, and the operation was performed by depression, the lens and capsule being carried downwards and backwards into the vitreous humour out of the field of vision. The patient's recovery proceeded very satisfactorily, and in the course of it phenomena were exhibited differing in some material respects from those described as having occurred in the cases narrated by Mr. Cheselden and Mr. Ware, in the Transactions of the Royal Society. Among these phenomena, all of which are minutely detailed by the author, the most remarkable was the power gained by the patient, a very short time after the operation, of accurately estimating distance. The author believes that his patient was more advanced in age at the time of the operation than any other upon whom the operation for congenital cataract had previously been performed with success. Mr. Cheselden's patient was thirteen, and Mr. Ware's only seven.*

FRENCH ACADEMY OF MEDICINE.—*Artificial anus formed in the new-born child according to the plan of Calisen.*—M. Amussat presented to the Academy an infant on whom

he had been obliged to establish, three days after its birth, an artificial anus in the left lumbar region, so as not to open the peritoneum. This infant was born with imperforation of the rectum at the distance of one or two inches from the anus, which was well formed; it was impossible to reach by this opening, either with a bougie or trocar, the intestinal cul-de-sac, which was distended with the meconium. There was, therefore, no course left but to form an artificial anus. From the success which M. Amussat had met with in the adult by operations in the lumbar region, he was induced to adopt a similar situation in this infant, although the plan proposed by Littre has been recently recommended as preferable for new-born children, on account, it is said, of the colon at this age floating in the abdominal cavity, and being entirely surrounded by peritoneum, which, according to M. Amussat, is exactly the reverse of what is habitually observed. It is now nearly three months since the operation was performed, and the infant is in a very satisfactory state of health, and seems as well developed as most children at its age. A free passage is allowed to the faecal matter through the artificial anus, but as there is a great tendency in this aperture to contract itself, it is necessary to keep it dilated with small wax or gum elastic bougies. M. Amussat remarked that there existed in the left iliac fossa a projection beneath the skin, especially when the infant cried. It is probable that the intestine terminated at this point, and that the entire length of the rectum was absent, or at least so far as the partition which was perceived at an inch or two from the anus. Would such a conformation have been favourable for the ingenious operation of M. Klewig de Colberg, an operation which consists in pushing down towards the perineum, through the opening in the lumbar region, the terminal cul-de-sac of the large intestine, and then forming the anus in the perineal or coccygeal region? But supposing, said M. Amussat, that this operation presented some chances of success, should we be justified in exposing an infant, otherwise in good health, to the uncertain result of an operation of so grave a nature? M. Amussat lastly pointed out the very great tendency which all artificial openings have to become contracted. The life of this infant was twice endangered in consequence of the contraction of the lumbar anus; and it was with difficulty that he could maintain a sufficient dilatation to avoid the recurrence of this accident. In all cases where dilatation becomes inefficient, M. Amussat recommends the angles of the wound to be lightly refreshed every day, or every second day, thus destroying the *pyogenic* membrane, which is constantly tending, in proportion as it becomes organized, to draw together the edges of the wound. This proceeding he has already applied with success in the treatment of stricture of the urethra and of phymosis, as well as in destroying the cicatrices of burns, in the section of the frenum of the tongue and of the genio-glossi muscles.

Absorption of various poisonous substances. By M. Orfila.—M. Orfila states that from numerous experiments which he has recently performed, he has arrived at the following conclusions:—1st. That sulphuric, nitric, hydrochloric, and oxalic acids, when diluted with water, are absorbed, and that they may be discovered in the urine. 2nd. That the same acids, in their greatest state of concentration, are in like manner absorbed, because they become weakened by means of the secretion of which they cause the exhalation as soon as they are brought into contact with the interior of the digestive canal. 3rd. That the absorption of the salts of lead, bismuth, tin, zinc, gold, and silver, cannot be contested, since we find in

* The above is the abstract made by the Secretary.

the liver and the urine of dogs, poisoned by these substances, the metals which enter into their composition. All these metals may be easily extracted by a similar process, the carbonization of the viscera in nitric acid, and the subjection of the residue to the action of hydro-chloro-nitric acid. 4th. That the salts of mercury are also absorbed and carried through the blood into all the organs; that to place this fact beyond all doubt, we have merely to dissolve in hydro-chloro-nitric acid the viscera of an animal poisoned by a mercurial salt, and to pass through the solution a current of chlorine gas; or, which is still better, to carbonize the viscera in some strong acid, in a closed vessel, and to treat the residue by boiling hydro-chloro-nitric acid. 5th. He has also found in the viscera, especially the liver, as well as in the urine, a portion of the iodine, sulphuret of potash, nitrate of potash, alum, ammonia, sal ammoniac, and chlorate of potash, with which he had destroyed animals subjected to his experiments. These constitute the principal researches to which he has bestowed himself, on the subject of absorption of mineral poisons; they establish, he considers, in an incontestible manner, the exactitude of the conclusions at which he had arrived in his previous memoirs upon the absorption of arsenic, antimony, and copper.

Vaccination.—M. Gauthier De Claubry read the conclusions of the annual report of the committee of vaccination for the year 1840. The following are the principal facts which it contains:—The number of recorded vaccinations had increased, in 1840, to 525,509 in 836,789 births; a proportion of 5 to 8. Of 45,060 vaccinations, the result of which is known, 44,179 were successful, and 881 unsuccessful. Twice there was produced a crop of pustules scattered over the body, the fluid from which produced the normal vaccine pustule; 14,470 subjects had been attacked in various districts with epidemic variola, 1,390 of whom have been left disfigured or enfeebled in constitution, and in 1668 the disease was fatal. There were 24 instances of a secondary attack, which, in 3 cases, was followed by the death of the subject. The greater number of those vaccinated, whether recently or some time previously, have escaped the variolous epidemic. Some have been affected with variella, or a modified form of variola, generally slight, and of short duration, but, in some cases, similar to vaccinia; in 406 subjects who have been attacked with this affection in various degrees of intensity, there were but 6 deaths, or more correctly, but 4 produced by this cause; thus making a proportion of 1 to 65, or rather 1 to 101. There have been 2,214 re-vaccinations performed, of which 1,704 were unsuccessful, in 227 a spurious vaccinia was produced, and in 270 secondary vaccinia, of a normal appearance; 3 subjects re-vaccinated with success were among those afterwards attacked with variella. 179,293 fr. 60 cent. have been expended in the service of vaccination, being a proportion of 24 cent. for each child vaccinated. The report concluded with the following resolutions:—

1st. Vaccination is a preservative against variola. Still this preservation is not indefinite in all cases: a certain number of subjects, who have previously been vaccinated, may still be attacked with an eruption, commonly designated variella. (After a discussion, in which some interesting facts were brought forward to prove the identity in nature, as well as in the source of contagion of *variola* and *variella*, but merely their difference in intensity, this resolution was adopted with the substitution of the word *absolute* for *indefinite*, and of a *small number* for a *certain number*.) 2nd. This eruption, although of a variolous nature, is

generally slight, and without danger. During the year 1840, among the patients affected with variella, the fatal cases were only in the proportion of 1 to 101, whilst in variola they were in the relation of eight and a half. 3rd. A first vaccination destroys the aptitude to a second vaccination, as well as to variola. Still in some subjects this aptitude is reproduced at the end of a certain time; thus there are some persons who have had variella, in whom vaccinia is developed in a regular manner, without our being able to conclude that they were in a state to contract variola. 4th. Re-vaccination, when most successful, is not a certain guarantee in all subjects against a final attack of variola. 5th. In general, variola occurs but once in the same person. Still, in some subjects, a second attack of variola may take place, of equal gravity with the first.

RECOLLECTIONS OF PARISIAN HOSPITALS, Being Notices of Cases in the Practice of Dupuytren, Roux, Bryer, and Lisfranc. By J. NOTTINGHAM, Esq., Surgeon, Liverpool.

CASE 1.—Gangrene of the fore-arm from fracture. Amputation at the elbow-joint. Dupuytren. Oct. 20, 1832.—The crowd at the Hotel Dieu rendered it difficult on many occasions to obtain a good sight of the patient, or to get from his own mouth his previous history. This first observation, like some of those which may follow, will betray an imperfect knowledge of the case: it is, however, to be understood that nothing more than a student's glimpse, and that obtained in his hurry from bed to bed, or from one ward of the hospital to another, will be portrayed in the reports now commenced.

The patient, a man aged about 38 years, had met with a fracture of the fore-arm; gangrene was the consequence—he was much reduced in strength, his features shrunk, and countenance pale.

The line of demarcation between the living and dead parts was not very well defined, and the mortification had extended so near to the elbow, that the point where the catlin was introduced, was not more than an inch from its upper border.

The brachial artery was compressed by an assistant (without tourniquet.) M. Dupuytren then passed the double-edged knife across the front of the articulation, from one humeral tuberosity to the other, and raising the soft parts with his left-hand, a flap of sufficient size to cover the denuded end of the humerus was cut from the anterior aspect of the fore-arm.—The ligaments divided, and the joint opened, the ulna was sawn through, so as to leave the olecranon in its place.

The posterior flap was very short; the two being approximated, were joined by strips of plaister. The stump was then surrounded by a quantity of charpie, and encircled in a linen bandage.

M. Dupuytren said that the olecranon being left, the triceps muscle would have greater power over the humerus, and the man, should the ease go on well, would be better able to extend the stump.

The patient was not without appetite for food, but was kept on very low diet after the operation, no wine or stimulant being administered.

M. Dupuytren did not seem to care to produce union by the first intention, as the soft parts were only loosely put together. The granulations which afterwards arose were fungoid and unhealthy in appearance.

The gangrene did not extend after the operation was performed, but the patient died at the end of three weeks.

REMARKS.—Without inquiring whether it

would not be better, in all such cases as this, to amputate immediately above the elbow-joint, two questions may be asked respecting the disarticulation, as practised by the great French surgeon:—

1st. Supposing the state of the soft parts not to prevent it, would not the circular operation, as recommended by Velpeau, deserve preference? Little more than an inch of integument below the joint would suffice with this plan to cover the pulley of the humerus, while a flap three or four inches long should be obtained on the fore part, where Dupuytren's practice is resorted to. After Velpeau's operation we might expect, as he says, a less abundant suppuration, and a reaction less considerable.

2nd. Can any advantage be gained by leaving the olecranon attached to the tendon of the triceps?

The attachment of the fibres of this muscle to the back part of the humerus, from its middle downwards, would appear to ensure to the patient afterwards a sufficient power of extension, and would, we think, be the main source of such power, for the anterior surface of the muscle is separated from the bone for an inch above the elbow-joint by a cellular interval, which is worthy of consideration, if we intend any mechanical advantage to result from leaving the upper extremity of the ulna.

Perhaps, however, it is more easy to traverse the ulna with the saw, than to glide the knife around the top of the olecranon.

As far as the healing of the stump is concerned, no great advantage could be expected from either plan over what might be obtained by the other.

It was remarked by English students, that during the after-treatment of such a case in a London Hospital, a more nutritious diet would have been given, with the addition perhaps of wine, or malt liquor.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Showing the number of Deaths from all causes registered in the four weeks ending April 2, 1842.

	March 12	19	26 April 2
Small-Pox	1 ..	3 ..	3 .. 3
Measles	16 ..	17 ..	16 .. 23
Scarlatina	12 ..	6 ..	16 .. 8
Whooping-Cough	49 ..	39 ..	34 .. 49
Croup	18 ..	12 ..	7 .. 9
Thrush	3 ..	3 ..	2 .. —
Diarrhœa	7 ..	6 ..	5 .. 2
Dysentery	— ..	3 ..	2 .. 1
Cholera	— ..	— ..	— .. —
Influenza	2 ..	— ..	1 .. 3
Typhus	26 ..	23 ..	23 .. 19
Erysipelas	1 ..	1 ..	3 .. 5
Syphilis	— ..	1 ..	— .. 3
Hydrophobia	— ..	1 ..	— .. —
Diseases of the Brain, } Nerves, and senses	134 ..	129 ..	139 .. 140
Diseases of the Lungs, and } Organs of Respiration	305 ..	269 ..	253 .. 253
Diseases of the Heart and } Blood-vessels	18 ..	19 ..	14 .. 20
Diseases of the stomach, } Liver, &c. .. .	65 ..	60 ..	55 .. 4
Diseases of the Kidneys, &c. } Childbed	7 ..	5 ..	5 .. 11
Ovarian Dropsy	5 ..	6 ..	1 .. 7
Disease of Uterus, &c. .. .	1 ..	— ..	— .. 3
Rheumatism	2 ..	1 ..	3 .. —
Diseases of Joints, &c. .. .	2 ..	3 ..	1 .. —
Ulcer	5 ..	2 ..	1 .. 3
Fistula	1 ..	— ..	— .. —
Diseases of Skin, &c. .. .	1 ..	— ..	— .. —
Diseases of Uncertain Seat	100 ..	106 ..	110 .. 120
Old Age or Natural Decay	69 ..	51 ..	52 .. 53
Violence, Privation, or } Intemperance	37 ..	24 ..	19 .. 35
Causes not specified	3 ..	2 ..	6 .. 13
Deaths from all Causes ..	890 ..	792 ..	770 .. 832

GUY'S HOSPITAL.—The annual distribution of prizes to the students of this hospital took place on Monday, after which the bust of the late Sir Astley Cooper, raised by his pupils to his memory, was uncovered. The bust was executed by Mr. Towne. The inscription is—"Astley Paston Cooper, alumni grato animo hoc, marmor posuere, 1841."

TO CORRESPONDENTS.

BOOKS RECEIVED—

A Set of Reports and Pamphlets by M. Civiale, on the Treatment of Stone.

The Medico-Chirurgical Review.

Observations on the Admission of Medical Pupils to the Wards of Bethlem Hospital. By J. Webster, M.D.

The Polytechnic Journal.

The Nervous System and its Functions. By H. Mayo, F.R.S.

Pharmaceutical Journal and Transactions. Edited by Jacob Bell. No. IX.

A Discourse Introductory to a Course of Lectures on the Institutes of Medicine and Materia Medica, delivered before the medical class of the University of New York, at the Session of 1841-2. By Martyn Paine, A.M., M.D., Professor, &c.

Notice of Reviews by the British and Medical Foreign Review, and the Medico-Chirurgical Review, (April, 1841,) of the Medical and Physiological Commentaries, as contained in the Boston Medical and Surgical Journal, of September, 1841. By the Author, Martyn Paine, A.M., M.D., &c.

Dr. Paine's Answer to Circular Letters by Doctors Carpenter and Forbes. Boston. 1842.

An Inquiry into the Nature and Causes of Epilepsy, with the Functions of the Spleen and the use of the Thyroid Body, &c. J. Jackson, Surgeon, &c.

Mr. Spencer sends us a pleasing note on the death of Sir Charles Bell. We shall transfer it to the hands of the gentleman who will give a sketch of the distinguished deceased in our next number. It may appear, however, in a separate form.

"Verité Sans-peur."—We thank our Correspondent, and shall not be led into the mistake feared. Gentlemen in practice in 1815 have now a legal right to practise.

Soda Water.—Mr. Webb has written us a polite letter denying that his compound comes under the category in which we, on the faith of a celebrated northern professor, placed all the soda waters made in the Metropolis, viz.—waters without soda. We are happy to mention Mr. Webb's denial, and should probably do his long letter greater justice if not fearful of advertisement duty.

Fair Play, who, we guess, is Peter H. Green, M.B., in disguise, wishes at this late hour to prove that we were completely wrong in denying him the merit of first discovering tubercles in the brain. We are scarcely justified in wasting a word on the subject; Dr. Streeten has settled the point. According to him, Dr. Schreüngen, of Ratisbon, assigns tubercular degeneration as the most frequent cause of acute hydrocephalus, and a similar observation has been made by M. Ruffy. Of twenty cases collected by the former, tubercle was found to occur in all! Has Fair Play ever heard of Dr. Streeten?

Observer, Medicus, H. D. F., Mr. S. W., Querist, declined. A Z.'s note is under consideration.

We intend to postpone for a short time Dr. Williams' Course of Lectures. The interval will allow us to finish the valuable set by Professor Chomel, and to complete another short course with illustrations, which we shall almost immediately commence. Dr. Scoffern's Lecture on Chemistry, Nemo's Pencilling of Sir Charles Bell, our Review and Analysis of Mr. Mayo's new work on the Nervous System, with Extracts from the German Journals, are unavoidably postponed till next week.

Brutus the Younger sends us an advertisement from the Reading Mercury, considering it "a proof, that even in the profession there are those who can condescend to put themselves on a level with quacks." A practitioner's talent, he adds, must be small when his reputation must be made by puffing. The paragraph is simply an acknowledgment from William Thresher, thanking God, and under him Mr. Buller of the Berkshire Hospital, for the cure of a malady which had made him a hopeless cripple for many months. Now, we should be very sorry to believe that Mr. Buller had any share in eliciting this

naïve acknowledgment, save the very creditable one of being the means of curing the man. Gratitude has many means of expressing itself, and poor William Thresher probably chose the one that occurred to him as the most facile and self-satisfactory. Though most anxious to suppress all newspaper puffing, we must yet decline to make men responsible for acts not theirs. Till there be some really strong presumption of guilt, we must hold a professional brother to be innocent.

THE MEDICAL TIMES.

SATURDAY, MAY 14, 1842.

— Gaudetque viam fecisse ruina.
LUCAN.

At a time when patriotism and disinterestedness in public servants are beginning to be looked on as things quite as apocryphal as ability in a Peter Hennis Green, or modesty in a Wakley, it is refreshing to a heart fond, like ours, of resting on the bright, hopeful side of humanity, to turn attention to the virtues recently made conspicuous by the glorious galaxy of Irish Poor-Law Commissioners. Our readers have doubtless heard of the Herculean labours they have so long borne, to give our Irish countrymen the benefit of larger domiciles and more regulated liberty. For some pitiful stipend of three or four thousand pounds apiece annually, have they, year after year, been giving up their magnificent minds to arrange the jobbing expenditure attending the building of unions, and to lay down the petty but useful rules by which the poor might be fed cheap, and medical attendance got a bargain. These years of turmoil and vexation were drawing to their allotted course; the unions were built, the laws and regulations framed and established, the happy moment of their retirement from onerous office, and income was just within their grasp; and lo! these matchless benefactors of our species, instead of rushing into the arms of the leisure and downy oblivion that so justly awaited them, have nobly come forward, chivalrously offering to continue their priceless services, and, in addition, to relieve the local trustees and governors of the Irish dispensaries and fever hospitals from the dreadful load of local influence, the dire encumbrance of time-killing committee deliberations, and all the other inconvenient fascinations attending the management of charitable institutions! Yes, to the discomfiture of all ill-natured doubters in the continuance of high virtue among our species—let the fact be everywhere proclaimed, the Irish Poor-Law Commissioners, at the very moment when the contemptuous ingratitude of all that knew them combined with the attractions of unburdened and unincombed leisure to invite them to retirement—these noble citizens, impressed with an overwhelming sense of public duty, heroically came forward and offered to bear the weight of place and stipend, with even increased responsibilities, for any indefinite period the legislature would permit them! Nay,

justly fearing that the country, out of a too squeamish regard for the greatness of their past labours, might be disposed amiably to force them to enjoy the otium cum deg. which their past services so richly earned for them, they most ingeniously cut out an immense mass of new work for themselves, and to overcome the too delicate scruples of the public have even strained truth, violated decency, for got the code of honour, (what severe sacrifices to such high-minded and honourable men!) in the patriotic and self-devoting task of showing that such a work *should* be done, and that none should do it—but *themselves*! Before men with so elevated a notion of public duty, and so utterly thoughtless of self in carrying it out, how lax appears the virtue of a Cato or a Howard!—how dim the heroism of a Scævola or a Curtius!

But before imposing upon them—good men!—such heroic sacrifices, it may be politic to make sure that their exuberant benevolence may not have urged them to miscalculate the necessity for so cruel an immolation of themselves. One cannot torture such good citizens without knowing why, and where there is so much goodness of heart, one is tempted—most ill-naturedly we admit—not to repose the most complete confidence in the wisdom of their heads.

This, then, is the state of the case: the fever hospitals and local dispensaries are peculiarly Irish institutions. One quota—about a half—of their funds must be raised by private subscriptions; the rest comes, as a matter of course, out of the county rates. The management of these bodies—including the choice of medical attendants—rests with the local subscribers. Now, the Commissioners are impressed with a notion that voluntary subscriptions are bad—that the subscribers should be forbidden their public charities, should be deprived of their local influence in reference to them, and that the institutions which they now govern should be placed under the control of the Poor-Law authorities. They have drawn out the form of a law which Lord Eliot is to submit to the House of Commons, and of which the following is the short summary:—

"The control of the medical charities to be given to the poor-law commissioners; their orders to have the force of law, and breach of any of them to be visited, on the first offence, by a penalty of forty shillings, on the second, of five pounds, (both recoverable by summary conviction before two justices), and on the third offence, with indictment for misdemeanor, fine of not less than twenty pounds, and imprisonment, with or without hard labour. The local management of dispensaries and hospitals to be placed under boards of thirteen persons, the majority to be elected by the poor-law guardians, without any qualification, except being males and of full age. The commissioners to have the determination of the qualifications of medical officers, their salaries, and their continuance in or dismissal from office—to have the power, "either upon or without

suggestion or complaint," to remove any officer and render him incapable of serving in future without their consent, and to fill up his place at their own discretion, in case the local committee should refuse to do so—all the present institutions to be abolished, and reconstructed upon the plan of this bill, and no security to be given to the present officers for their reelection: a medical board of seven is created, but with only a power of giving suggestion."

The sum now paid in voluntary subscriptions to support these charities is about £42,000 annually. The Commissioners munificently propose that these should be instantly stopped, and the whole burden of support placed on the Poor Rate. And on the chance of what may be yielded *additionally* by the Poor Rate—a tax which has all the hatefulness of a new impost—which many of the Irish people oppose on moral and political principle, and nearly all on the grounds of domestic economy; a tax heavy beyond all precedent, and which the people, already combining together in a variety of districts, are determined to peril all the consequences of law defiance rather than pay; on the chance, we say, of what this impost, so hated and so resisted, shall afford *beyond* its present results, this immense sum, on which the mitigation of so much human misery depends, is to be given up! O, wise Commissioners! As Vespasian, who taxed even an animal secretion could build triumphal arches and magnificent aqueducts, so our Commissioners, who think they have accomplished a great victory when they have reduced by a pound a poor doctor's salary, can, with one stroke of the pen, sacrifice £40,000 annually! The thought contains comfort for the wretched and impoverished doctor. He is not crushed for nothing!

Strongly condemning the abandonment of such a sum (so satisfactorily collected,) we cannot less strongly condemn the main object of the abandonment. The Commissioners evidently want to destroy the local control over these charities, and to substitute for it their own. Now we are earnest advocates for local government of local institutions. Whatever errors there may be in such management, we contend that there are none which bear analogy to the enormous mischief of that great social unfairness—*centralization*; a system which has no meaning but power in the capital, and barbarism in the provinces of a country, and which we firmly believe cannot co-exist with a manly, dignified, or enlightened nationality. And then what absurdity is there not in placing varieties of places under sameness of regulations, fitting to the Procrustian bed of unity of principle, wants varying in the same locality at various times, and varying at all times in every second locality! Admitting to the utmost all that can be alleged against the party spirit, or prepossessions of local managers, we should yet be bound to support their continuance in office on the very score of being infinitely less faulty in their management than

any men can be who are governed by general and unalterable rules, and act from a distance.

We are not going, however, to discuss the principles of the proposed measure: the position—the character of the parties recommending it make such a step quite unnecessary. We remember, first, that whatever other effect their measure would have, it would clearly have this—it would prolong the official incomes which alone stand between them and beggary. Now, when we find the gentry of Ireland including the whole profession from its most distinguished ornaments down to its humblest but not less useful apothecary—united in one mass in stout condemnation of the Bill—and on the other side find three or four speculating adventurers—the West Middlesex Insurance gentlemen of political life—as staunchly insisting on its excellence, the conclusion of an honest man is reached without further deliberation, and buttoning up our pockets, we beg the Nicholls, the Holts, the Phelans, and the Laws to carry their lucrative projects to parties more easily gulled. That the men should have recourse to what an able and honourable contemporary, the "Dublin Medical Press," avouches to be "vile misrepresentations and suppression of facts,"—that they should allege that medical men supported them who have recorded the strongest contradiction to the injurious assertions,—that intriguing on every side (unsuccessfully, we are glad to say,) they should tell the "Infirmary surgeon that he shall be let alone—the Fever Hospital attendant that *he* shall be made an infirmary surgeon—the practitioner without employment that he shall be provided with a dispensary"—that they should thus lie, calumniate, raise false hopes—establish false beliefs—all this is natural enough; they *must not* fail, their ALL depends on their success! Let the Irish medical men remember that *their* all depends on their *failure*. The fate of union surgeons on this side of the water is bad enough, but our Commissioners are at least gentlemen. The Irish Commissioners are, NICHOLLS, PHELANS! Whether convicted or unconvicted, let those answer who have read the investigations on the North Dublin Union business.

ROYAL COLLEGE OF SURGEONS, LONDON.

List of Gentlemen admitted members on Friday, May 6, 1842:—

Francis Nathaniel Greene, Henry Charles Curtis, Thos. Gaskell, Henry William Watson, John Perry, John Alfred Carr, Henry Dixon, George Frederick Whately, Augustus Prater, Thomas Harvey Lowry, Thomas Bridge Trowbridge, George Taylor.

Admitted Monday, May 9, 1842:—

William Henry Carnegie, Samuel Nathaniel Elliot, Herbert Baillie, William Baillie, John Mills, Augustus Hardy Godby, James Henry Reynett, Robert Dalvelle Ward, Henry Gaskell, Henry Woodward, John Teare, William Murdock.

EVILS AFFLICTING THE MEDICAL PROFESSION.

To the Editor of the 'Medical Times.'

"OUR hopes of the increasing usefulness and efficacy of our art must depend, partly on the improvement of medical education, and the more uniform diffusion, through the members of the profession, of the knowledge which we already possess."—DR. W. P. ALISON.

SIR,—Among the evils that exist under our present form of medical education, none more prominently stand forward, or more promptly require attention, than the apprenticeship system.

In former days an apprenticeship to some respectable practitioner might have been found desirable, and the best means to adopt for initiating the tyro into the mysteries of physic, or rather of pill-compounding and black-draught manufacturing; indeed, in these accomplishments consisted the sole education of the practitioner, and thus *qualified* he was let loose on society. But under the present much improved and advanced state of education, it is utterly barbarous and quite unworthy of the profession. The apprenticeship, as served to medical men, is in most cases a complete waste of time and money, and this at a period of life when the faculties are in full vigour. The unhappy youth is doomed to drudge in dispensing his master's prescriptions, keeping his books, and writing his bills, and, possibly, he may, in blissful ignorance, be allowed to attend a few midwifery cases, draw teeth, bleed, and see a few ordinary cases of disease, although in thousands of instances even these privileges are never awarded to the pupil, and his knowledge at the end of five years' servitude consists in being able to dispense rapidly, prescribe a dose of opening medicine, and label, cap, and paper a bottle neatly.

This is notoriously the fact, and it is painful to witness the perfect ignorance displayed by students, in regard to all the necessary and essentially useful studies relating to medical science, when they arrive in London at twenty-one or twenty-two years of age, for the purpose of walking the hospitals; they then find themselves but just commencing. How often have I heard young men regret, at this period of their career, the time that had been uselessly employed: well may they, for I hesitate not to say, that the principal benefit conferred has been into the practitioner's pocket.

The present apprenticeship system is also the source that has overwhelmed the ranks of the profession, and that is weekly pouring additional dozens into it. In many cases the only object desired by the practitioner has been to obtain the premium, and apprentices have been taken for this purpose alone. In one provincial town that I know, every medical man in the place had, at one time, either two or three pupils. Some, especially in London, are glad to take any one they can obtain, either with or without premiums; and thus is it that all classes of men are daily thrust into the ranks. In a science like medicine such things should not be. The apprenticeship ought to be entirely abolished, and other means substituted for really educating young men in the principles of medicine.

Let there be proper schools, or colleges, established in various large towns throughout the kingdom, under the government of capable persons, and let certain professors be elected, whose sole office and occupation shall consist in instructing the pupils of the institution. Let each institution possess a museum, library, and all the requisites for teaching; and here let the elementary parts of the different sciences, viz., anatomy, physiology, chemistry, materia medica, botany, &c., be taught, both theoretically and practically. Let each student spend three or four years in one of these establishments, be completely under the control of the masters, and at the end of this period let him proceed to London, or elsewhere, to study his profession in the great hospitals of the metropolis, and there also under competent instructors. A system like this would at once

raise the respectability of the profession, and the public would rightly appreciate medical talent; this would ensure none but properly educated individuals being admitted into its ranks.

These are not Utopian schemes, and I firmly believe there is nothing to prevent some such method being enforced. The great bugbear to medical reform is the unwillingness shown by all the medical corporate bodies to yield up one iota of their power—there is no feeling of disinterestedness exhibited, no sacrificing of self-interest for the general good.

There is another point on which it is as well to speak, and it shows how ignorant the public are in regard to medical education, viz., that most parents are grossly deceived by the apprenticeship system, and there are few who have contemplated the many additional expenses they will be put to in completing the education of their sons. Hence many young men are thrown on the world to exist as best they may, and to find themselves more miserably situated than common journey-men.

Evils like these loudly call for remedies. All humane professional men ought to do their utmost to obtain the abolishment of these evils; self-interest should be sacrificed at the shrine of public duty, and we should then have the pleasure of beholding our own respectability increased, and the profession generally raised to that estimation in public opinion, that its objects and pursuits demand.—I am, Sir, your obedient servant,

A GENERAL PRACTITIONER.

THE STUDENTS' NOTE-BOOK.—FASCICULUS XII. By ANATOMICUS.

Properties of Muscular Fibre.—These are arranged under the head of physical and vital. The first comprehending those which are connected with its mechanical form, its structure, and its obvious external characters; the second comprising its powers as forming a part of a living organized body.

Muscular fibre is cohesive, flexible, extensible, and perhaps elastic. There is great difference between the extensibility of the proper muscle and that of the muscular coat, the former limited from its connections, the latter almost unbounded—as the uterus. The vital irritability or contractibility is defined thus—that power which muscular fibre possesses of diminishing its length, or of contracting and shortening itself. Relaxation is the natural state of muscle, or that condition which it effects when not acted upon by any external cause; on the application of a stimulant its contraction commences. The surface becomes furrowed and wrinkled, its belly swells out, grows hard and firm to the touch, while the ends approximate, and the whole muscle is rendered thicker and shorter. Is the specific gravity increased or diminished during contraction, or whether the fibres gain in thickness precisely what they lose in length? Glisson's experiments seem to prove that the muscles diminished in bulk; Sir G. Blane and Sir A. Carlisle, that its absolute bulk and specific gravity are not changed during contraction. Is the quantity of blood diminished in muscle during its contraction? Most of the earlier writers supposed it to be the case; it was the opinion that the muscle was rendered small and became pale. Bichat was of opinion, that during the operation of drawing blood from the arm, the flow is increased by the contraction of the muscles; but this blood expelled is not derived from the capillaries, but the large venous trunks pressed upon by the bellies of the muscles.

Contractibility and Elasticity.—Elasticity always depends upon simple reaction, and is never the source of actual power; it merely restores in a contrary direction the force which had been impressed, and even when acting to the greatest advantage, the effect which it pro-

duces can never be greater than the amount of the cause, and the reaction can never take place as long as the cause continues to be applied. The force with which a steel spring recoils is only equal to that which is required to bend it.

In muscular contraction, the mechanical effect is greater than the mechanical cause producing it; and while at the very time that the cause is applied, and is acting with all its force, the reaction commences, and far surpasses the force of the agent. But what is still more decisive against the doctrine, that contractibility is only a modification of elasticity, is, that the most considerable effects of muscular action are frequently produced without any mechanical cause at all, when the agent is of a kind which has no relation to any of the mere physical properties of matter; a remarkable circumstance respecting contractibility is, that in all muscular action, however powerful be the stimulant, still after some time the effect ceases, and the muscle becomes relaxed, even although the stimulus continues to be applied. Besides the antagonist muscles, another counter-acting force is elasticity; a third means is force of gravity. Stimulants may be mechanical, chemical, and vital. Tonicity, another specific property, is illustrated by the retraction which muscle exhibits when its fibres are divided transversely, or by the drawing up of one side of the face, when the other has been paralysed. It is a contraction which muscular fibre exhibits when not under the influence of any distending force. Haller supposed the *vis nervæ* was a property of muscular fibre.

Use of Muscle.—Muscles are the great organs of motion; all their effects are brought about by the act of contraction, or that by which the fibres shorten themselves, and by approximating the ends of the muscles, draw together the parts to which the ends are attached.

Mechanism of Muscles.—Their action consists in the approximation of their extremities, in consequence of the shortening of their fibres, and that the immediate effect of this is to move any body to which the ends are attached. In order to promote the symmetry of form, and a facility of motion, we find, that in many cases the flesh of the muscle itself is not inserted into the body which is to be moved, one or both the ends terminating in membrane. Borelli referred the action of the muscles upon the bones and solid parts to the effect of a mechanical power acting upon a lever.

The fixed points of the body, from which motion commences, or against which the muscles react when they begin their contractions, are generally the bones, and the motions are performed by the intervention of joints. The part where the muscle or tendon is inserted into the bone will represent the power, the joint the fulcrum, and the part that is moved constitutes the weight. Writers on mechanics have divided levers into three kinds according to relative position of their three essential parts, the weight, the power, and the fulcrum. Those of the first kind have the fulcrum in the centre, the second the weight in the centre, the third the power is in the centre; the bones are of this last description, in which the power is placed between the fulcrum and the weight. The motion of the fore-arm may be taken as an example of the effect of muscular contraction, and the manner in which it is produced. When we wish to raise a weight by bending the elbow-joint, it is effected by muscles situated below the shoulder, which have tendons inserted into the top of the bone of the fore-arm near the elbow; the manner in which the muscle acts in this case proves that the mechanism of the animal body is calculated to produce a great loss of absolute power. It is an established

position in mechanics, that in the action of levers, the power is to the weight, as the distance between the weight and the fulcrum is to the distance between the power and the fulcrum. In the present case, therefore, a small part only of the power of the muscle is exerted in raising the weight, the rest being expended in acting against the disadvantage of the position. It is a general fact, which is termed a law in the animal economy, that muscular power is always sacrificed to convenience; had the object been to raise the weight with the least possible power, the muscle would have been placed on the fore-arm, and another also inserted into the lower part of the shoulder-bone; but in this case the awkwardness of the limb would have much more than counter-balanced the supposed advantage of the saving of muscular power; the remark applies with greater force to the fingers. At present they are moved by the contraction of muscles placed on the fore-arm, and are connected to them by long delicate tendons, which pass over the wrist; but if this order had been reversed and the flesh of the muscle had been placed over the fingers, the hand would have been almost useless from its clumsy form. Another important advantage where the power is situated near the fulcrum is, that we acquire a great degree of velocity; most of the muscular fibres are so placed as to act obliquely; by this arrangement a quantity of power is lost; what we in this case lose in power we gain in the saving of the quantity of contraction. A third source of loss of power depends upon the situation of the muscles with respect to each other. A fourth loss of power is, that the tendon is generally inserted into the bone at an acute angle; whereas, in order that the power should have operated to the most advantage, it ought to have acted upon the lever in a perpendicular direction. Fifthly, the two ends of the muscle pulling against each other.

CASE OF DIARRHŒA.

By Dr. CLENDINNING.

A GENTLEMAN'S son, of about one year and a half old, living on a clay soil, and in a rather damp locality, had been observed by his mother and attendants to have the bowels rather looser than common for a considerable time in the course of the first half of the year 1840, but not so relaxed as to excite alarm, or call for the physician's assistance. In the summer and autumn of that year the parents left home on a protracted visit to friends in a distant province. During the child's absence, his bowels were in a natural state comparatively or altogether. But after his return home late in the autumn, and about the commencement of last winter, the bowels became again unduly relaxed, and the child lost bulk and strength. A course of medicines was then entered on under the judicious advice of a neighbouring surgeon. The means, as far as I can recollect, that were employed, were a cautious diet of farinacea and broth and beef-tea, and medicines containing chalk and aromatics, gum, and a little grey powder. Under these means the diarrhœa was kept, in some measure, in check. Instead of advancing rapidly, and gaining on the child's constitution, it often seemed stationary.

After some months' perseverance in this plan, the parents consulted me. In January last I saw the child for the first time, and carefully examined it in conjunction with the family medical attendant. The appearance of the little patient was not very unfavourable; his colour in particular was pretty good; his tongue was clean; but on directing my attention to the pulse, the skin, the voluntary

powers, the nutrition, the appetite, I found him in a very extenuated and debilitated condition. The pulse was small, feeble, rapid; the skin cool and dry; the power of sustaining himself in walking nearly or altogether wanting; the body and limbs much wasted; the appetite capricious and insufficient. He had a great many motions in the twenty-four hours, and was disturbed repeatedly every night by calls more frequent, as I recollect, and more urgent, than those of the day-time. There was no trace of worms; no blood or pus; no want of the usual colour in the stools, which were normal, I may say, in all points, save frequency and consistence. The abdomen was neither tender nor tumid; there were no glandular swellings; the pectoral viscera were ascertained to be sound. The child had had no motion for some little time before my visit, but, on applying my ear to the abdomen, the gurglings and clickings that accompany intestinal action could be heard loud and in quick succession, just as occurs in artificial catharsis. Under these circumstances I advised the use of blue vitriol, with opium, in the following form:—

R. Sulphat. Cupri, gr. $\frac{1}{2}$;
Pulv. Cretæ Comp. c. Opio, gr. v.;
Sacchari Albi, gr. v.;
Pro dosi 4ta. vel 6ta. q.q. horâ sumend.

I advised, at the same time, that the abdomen should be swathed in flannel, but made no important alteration in the diet on that occasion. Under this plan some mitigation of the symptoms was soon evinced by a less frequency and less liquid state of the evacuations. The child being resident in the country, I did not again see it for some little time. At my second visit I found the diarrhoea considerably abated, but by no means suppressed. The copper agreed well with the stomach. On this occasion my attention was directed principally to the state of the stomach and skin, of the pulse and voluntary power. The dry state of the skin and coolness of extremities, taken along with the continuing inappetency and feebleness of the pulse and great muscular debility, determined me to recommend that the copper should be increased, that Dover's powder should be substituted for P. Cretæ Comp. c. Opio, and that a little Sulph. Ferri should be added according to a formula, such as the following:—

R. Cupri Sulph. gr. $\frac{1}{2}$;
Ferri Sulph. gr. $\frac{1}{4}$;
Pulv. Doveri. gr. iss.
Sacchari Albi, gr. v.

M. pro dosi 4ta. q.q. horâ sumend.

At the same time a little wine was ordered, about a glassful per diem, in arrow-root. There was further a large addition made to the woollen clothing, his whole person (the head and hands, of course, excepted) being enveloped in flannel. Under this more extended use of astringents, tonics, and anodynes internally, with a still more stimulant and sustaining diet, and a complete under-clothing of wool, the child mended steadily, and pretty rapidly, so that I had no occasion to leave home to visit him again. In the course of June he had some return of his diarrhoea, after having been for many weeks quite well; and this was met by a recurrence to the mixture of copper, iron, and opium, in larger doses; viz., Sulph. Cupri. Sulph. Ferri, aa. gr. ss. 4tis horis; with 1 to 2 grs. of Dover's powder; with the same result as at first. This child is now in excellent health.

In this case I attribute a considerable portion of my success to my having armed the person with a panoply of woollen material. Without the assistance of the warmth and gentle sudorific action of the woollen clothing, I believe I should have had more trouble in subduing the bowel complaint, and the case would, in all

probability, have proved much more obstinate than I found it.

EXTRACTS FROM FOREIGN JOURNALS.

[For the Medical Times.]

Mucous Fever.—The following interesting case which occurred in the Military Hospital of Namur, is related by Dr. Fallot, the Head Physician to the Institution.—A man named Vanleuven, 22 years of age, of a middle height, with chesnut-coloured hair, blue eyes, and usual good health, entered the hospital on the 21st July, having been ill for four days; he stated that he had at first been attacked with powerful diarrhoea, followed by loss of strength and appetite. On his entrance, he complained of vertigo; great depression of spirits; acute pain over the orbit; tongue white and red at the edge; great thirst; difficulty of breathing; skin dry and hot; pulse wiry, about 100 in a minute; constipation, &c. (Venesection to about 16 ounces, the coagulum formed being soft and flabby.) The patient was immediately relieved by the operation, and passed an excellent night. Towards morning a gentle perspiration took place, but the bowels had not been moved. On the 22nd, at our visit, the head was better, and the spirits improved; the features were pallid; the tongue seemed swelled, slimy, and red along the edges; thirst moderate; respiration easy; skin moist; pulse 90, equal and regular; the abdomen felt doughy; borborygmi along the course of the colon (*lavement*). 23rd. A violent paroxysm towards night, during which, however, he had remained free; he passed a tranquil night, sleeping soundly till morning; general perspiration of an acrid odour; urine pungent, and depositing a very abundant flaky sediment. At our visit, the face looked better; the head free; tongue white; no thirst; he felt hungry; the respiration was easy; the skin moist; pulse 70, and regular; abdomen soft. The lavement of the previous day had been followed by a copious liquid evacuation; the bowels had not acted since (common ptisan). 24th. A very marked paroxysm took place the previous evening, characterised in an especial manner by the acrid character of the heat; towards eleven o'clock perspiration took place; the mucous deposit in the urine is still more abundant than on the previous day; night tranquil. At the morning visit, his face looked better; the head was free; the tongue rather curled up, red along the edge, and streaked with white; thirst moderate; the patient felt a little appetite; respiration easy; skin soft; pulse regular; abdomen soft (continue the ptisan). 25th. In the fore part of the night, there was a little acceleration of the pulse without any corresponding increase in the heat of the skin; the night was tranquil; the bowels were moved once in the 24 hours; urine of a brown colour and clear. At my visit the fever had again disappeared; he asserted that he felt well, and complained of hunger; the tongue presented the same appearance as on the day before (continue the ptisan). 26th. During the early part of the preceding evening, a prolonged shivering took place; afterwards, burning heat with great head-ache during the night; general diaphoresis; urine of a pale red colour and turbid; bowels moved well. When I saw him, there was a perfect absence of fever, the disease seeming to assume the intermittent character (continue the drink). 27th. A new access of fever took place about one o'clock in the afternoon; a very abundant deposit was thrown down in the urine, but it was still of a mucous character, and differed from that common to intermittent fevers; (six grains of sulphate of quinine). 28th. At my visit the fever had gone;

a slight paroxysm took place towards 3 o'clock in the afternoon; the urine continued to present a mucous sediment; (continue the quinine). 30th. No return of fever; the functions now assumed their regular course; (continue the medicine). 4th of August. He still continued taking the quinine. On the 10th, he left perfectly cured.

REVIEWS.

An Essay on the Nature of Epidemic, Endemic, and Contagious Poisons. By E. O. Wildman Whitehouse, Articled Student of the Royal College of Surgeons, and Member of University College Medical Society.

THIS essay was originally read before the Medical Society of University College, and since printed for private circulation. The subject is one of very considerable importance, and fully open to investigation. A class of writers have sprung up under the name of *non-contagionists*, who have endeavoured to prove that the propagation of disease by contagion is an invention, and that no such influences exist. History, and the experience of all nations, in all ages, sufficiently proclaim to the contrary; and, indeed, the well-authenticated instances that have been brought forward by the learned and talented authors who have of late years written on contagion, convey undeniable proof to all unprejudiced minds, of the frequent communication of disease in many cases by these means. It is true, chemical analysis has hitherto failed to detect these injurious emanations, but of their existence and diffusion through the atmosphere few can doubt.

Our author considers *contagion* as signifying the propagation of disease from one individual to another, and includes in this definition not only its communication by absolute contact, but also that mode of propagation without contact usually known as "infection." Some contagious diseases, he observes, are communicable *only*, so far as we know, by the conveyance of actual visible matter from the infected to the healthy person—as in the case of scabies, morbus pediculosus, syphilis, and gonorrhœa. Others are as easily communicable without the aid of any *visible* material agent, so far as has yet been proved. Among these we place all contagious fevers, especially scarlet fever; also measles and small-pox, though these two may be more surely conveyed by inoculation. Of this latter class he says of the poison much remains to be discovered; it has not yet been obtained in an isolated form, and hence has not been made the subject of direct experiment. Of the facts which bear immediately on the nature of the poison (*contagion*), the following are enumerated:—

1. The power inherent in the contagious poison of producing its peculiar effects is greatly impaired by dilution with plenty of fresh air, so that beyond a certain distance the disease is incapable of being communicated at all; and it would appear that this limit varies in different diseases. He instances plague, contagious fevers, small-pox, and measles.

2. There is good evidence of the contagious poison attaching itself to certain substances called fomites—as woollen clothes, furniture, &c., and acting upon persons to whom it may be applied at the end of weeks, or even months.

3. At times the poisonous exhalation arising either from patients labouring under contagious diseases, or from fomites, would seem to be in so concentrated a form, or to be so little diluted by fresh air, as to be at once perceptible to the senses; and in such cases the application of the poison is generally very rapidly followed by a severe form of disease. Dr. Tweedie has recorded cases where a heavy and disgusting

odour was perceived; headache, nausea, and rigors, almost immediately followed; and fever of unusual severity ensued within twenty-four hours.

4. It was at one time contended, that many if not all diseases were dependent upon, or produced by, a certain state of the blood or other fluids. Setting this aside, as not sufficiently proved, I think we must admit, as an ascertained fact, that some contagious diseases are communicable through the medium of this fluid. Thus the venereal disease has been communicated to the fœtus in utero by a mother labouring under secondary syphilis.

5. Even the secretions are capable of giving rise to contagious diseases in healthy individuals. An infant has received the venereal poison through the milk of a nurse labouring under secondary syphilis. Disease has been communicated by a cow to its sucking calf; and persons making use of the milk or butter from the same cow have been affected. The well known increased liability to the reception of these diseases by persons labouring under debility and inanition, and the comparative safety of those in full and robust health: these facts, when viewed in connection with the physiology of absorption, lead us to an important conclusion—viz., that contagious diseases are most readily received when the powers of absorption are most active, and *vice versa*.

Endemic and epidemic diseases, and some important facts connected with their mode of propagation, are briefly glanced at. The author then justly observes, "however varied in detail the facts which I have endeavoured to lay before you may appear—however unconnected with each other in many points, they yet agree in one; they seem to show that these invisible poisons are not so mysterious in their nature as to be wholly beyond our cognizance—that they are subject to physical laws, and are under the influence of physical agents." And, again, "we are led almost irresistibly to the conclusion, that the diseases in question depend upon the reception by a healthy individual, not of any immaterial agent, whose very existence is hypothetical, but of something having a material form and character."

In alluding to the various theories that have been proposed to account for the production and propagation of contagious diseases, and in reference to the unsuccessful efforts of chemists to detect these subtle agents, it is asked "whence arises this failure in the attempt to demonstrate that which so obviously has a material existence, and whose presence in some cases is even at once recognised by our senses? Mr. Whitmore suggests, that in removing moisture from the air, previous to its final analysis, chemists may have been taking away that which held the poison in solution or suspension; and that by doing this by means of hygrometric substances, they have either destroyed or neglected the active principle which they were seeking.

This gentleman proposes instituting a series of experiments, to endeavour to satisfy himself as to the truth of these premises, and expresses a strong "hope that at some future time these subtle agencies may yet be classed among the recognised and well understood 'cognizable agents,' and by the further increase of our knowledge, the term 'non-cognizable' may fall into disuse."

We have thus given a brief outline of some of the most important deductions and suggestions contained in this essay. Here is a wide field of discovery and investigation open to all ardent inquirers—one equally worthy of the attention of the philanthropist and philosopher—for it is by striving to obtain a more

intimate knowledge of the nature of these noxious agents that we can alone look for, and hope to obtain the means of resisting their influence. He who shall succeed in doing so will prove a true benefactor to his species.

The essay itself is highly creditable to the talent and industry of Mr. Whitehouse; such productions always speak well for the author, and forebode success in the more laborious duties attendant upon the medical student's future career. We trust his own promised researches on the nature of the poisons will be carefully followed out, and that he will ultimately be successful in dispelling much of that obscurity at present entertained concerning them.

The Polytechnic Journal. 13, Wellington Street.

A NUMBER for April of this very interesting journal has been placed in our hands. It fills a niche in the temple of monthly literature long vacant—and fills it, if we may judge from the present number, in a manner quite as creditable as useful. The article by Mr. Bagg, on his "patent process for printing silks, calicos, paper, and other fabrics, by voltaic electricity," is a well written, and closely reasoned paper. The following is the pith:—

If we take a plate of copper and a plate of zinc, and immerse them simultaneously in a vessel of dilute sulphuric acid, the zinc will immediately begin to be dissolved, and bubbles of hydrogen gas, resulting from the decomposition of the water, will be extricated from its surface; but no effect whatever will be produced upon the copper so long as the two metals do not touch each other; the moment, however, that they are brought into contact, nearly the whole of the hydrogen gas makes its appearance upon the surface of the copper, though the zinc is still the only metal which continues to be dissolved.

There is, in fact, a very extraordinary force thrown into circulation by the contact of these metals under the circumstances described. This force is termed galvanic, and in the line of its passage from the zinc to the acid, from the acid to the copper, and from the copper back again to the zinc, it produces a very singular class of effects. By combining together a number of these simple arrangements in consecutive order, so that the electricity generated by each pair of plates shall circulate through the whole series, the energy of the power which is thus called into action becomes highly exalted, and we have what is termed a compound voltaic battery. By attaching wires or slips of flexible metal to the two ends of the battery, a facility is afforded of transmitting a current of electricity through any body upon which we may wish to operate.

Suppose we pass this current through muriate of soda, or any other saline solution, decomposition takes place, accompanied by a definite transfer of the resulting elements to the two poles or terminating wires of the battery. The hydrogen of the water and the alkali of the salt make their appearance at what is termed the negative pole, and the oxygen and the acid at the positive pole; and if the metal forming this latter have a moderate affinity for oxygen, it will be chemically acted upon and dissolved. The extension of this one fact is all that is requisite for the production of the most elaborate designs by voltaic electricity.

Let it be required to print in two colours, blue and brown. A compound pattern must be formed in such a manner as to present to the cloth, or other substance to receive the impression, different metals in different parts of its surface. The metals in this case would be iron and copper, and the mode of printing such a pattern will be readily understood from the following description:—

Upon a smooth plate of metal, in connexion with the negative pole of an active battery, two or three thicknesses of calico are to be placed, having been previously moistened with a mixed mordant of nitrate of soda and ferrocyanate of potassa.

On the calico is laid the metallic design. This contact, however, produces no effect until the upper plate is touched with the positive wire; but the moment the electric circuit is thus completed, a decomposition of the interposed solution takes place; hydrogen, potassa, and soda pass to the negative pole, whilst oxygen, with nitric and ferrocyanic acids, are disengaged at the positive pole; where, acting upon the metals thus presented to them, an accurate copy of the design, in its proper colours, is instantaneously produced. The cause of this is obvious; ferrocyanate of iron is blue, and ferrocyanate of copper is brown, and thus the two pigments required are produced wherever the two metals touch the cloth.

The introduction of nitrate of soda into the mordant is for the purpose of facilitating the passage of the electricity, and of preventing the incrustation of insoluble matter upon the metals, which, without this aid, would inevitably take place, and totally check the operation after two or three impressions.

But let us take another example.

To print in red and black, the cloth must be soaked in an aluminous mordant, and the design made of one metal alone—iron. This is touched with the positive pole of the apparatus, as in the instance just given; and, after the current of electricity has passed through the cloth, the latter is to be immersed in a decoction of madder. Whenever the pattern comes in contact with the cloth there will be a black impression developed, whilst the remaining portions will be dyed red.

Discharges may also be produced by this means, or a topical alteration of colour obtained when required.

If a zinc plate be placed upon calico, already dyed with Prussian blue and moistened with nitrate of soda, and lying on the positive pole of a battery, the moment the zinc is touched with the negative wire the blue is changed to a beautiful brown in those parts of the cloth which transmit the electricity; for the alkali no sooner reaches the negative plate than it decomposes the Prussian blue, taking up the acid, and precipitating peroxide of iron.

A great variety of these effects may be obtained. Cloth dyed with indigo, and moistened with a solution of common salt, slightly acidulated with muriatic acid, is bleached by the battery at the positive pole, which, in this case, should be made of platina.

It must not be forgotten that in conducting these experiments it is necessary to use starch, or some other thickener, with the mordants, as otherwise the colours would run.

The principles which have been advanced and exemplified in this very brief account, are susceptible of indefinite modification; and when the light of science has been brought to bear more fully upon the subject, it is confidently anticipated that a wide field of application will disclose itself in our arts and manufactures. Electricity will entirely dispense with that complicated machinery at present required in the process of topical dyeing, and the many tedious operations attendant upon the system now in use will be considerably abridged by the introduction of this wonderful agent.

Much important matter has necessarily been excluded in this notice, but the subject will probably be again recurred to at no distant period.

In the meantime we would refer those of our readers who may be desirous of obtaining additional information to the popular and interesting lectures of Professor Backhoffner,* who has devoted much pains and attention to the details of the invention, which he explains and illustrates in his usual lucid and felicitous manner.

There are other papers of equal interest—among which we cannot but include the paper on Animal Tuition and Animal Hygiene, by Dr. Lhotsky. The views he announces are sometimes singular and novel—but nearly always judicious. We recommend the work to our scientific friends.

* At the Royal Polytechnic Institution.

An Inquiry into the Nature and Causes of Epilepsy, with the Functions of the Spleen, and the Use of the Thyroid Body, &c. By J. Jackson, Surgeon, &c.

THE work of which the above is the title, embraces two important subjects of inquiry—first, the cause of epilepsy; and, secondly, the uses of the spleen, thyroid, and thymus bodies, placenta, supra-renal capsules, pituitary, pineal, and Wolfian bodies. While we willingly accede to the author our mood of praise for the scholarship and ingenuity which his essay displays, we can by no means assent to his conclusions—he has failed entirely of convincing us. On the subject of epilepsy he has jumped at his conclusion, instead of working it out by fair argument; and with regard to the physiological part of his subject he has established nothing, and his opinions are not a whit more rational or less absurd than those that have been formerly promulgated upon the subject. His first object is to establish the fact that epilepsy depends upon a congested state of the cerebro-spinal axis of the nervous system. To establish this position our author performed three experiments. In the first he tied the vena cava superior above the entrance of the vena azygos, which was at first attended with insensibility, but upon unloosing the dog, to the astonishment of the operator, he got upon his legs, shook himself, and without apparent difficulty walked away to a distant corner and lay down. He was afterwards killed, and the ligature found properly applied. Having thus satisfied himself that cerebral congestion gives origin to insensibility, it occurred to him, he says, “that convulsions might probably be produced by spinal congestion.” He accordingly goes to work, opens the thorax of a dog, applies first a ligature upon the vena azygos, and then upon the vena cava superior; the dog dies under the operator’s hands, exhibiting symptoms of tetanic convulsions. A second experiment of a similar kind was performed with a similar result. From these experiments the following inferences are drawn:—

1. That cerebral congestion gives rise to insensibility, and spinal congestion to convulsions.

2. As the presence of cerebro-spinal congestion in the epileptic paroxysm is denoted by the lividity and turgescence of the face and hands; and as insensibility and convulsions are the two essential symptoms of the paroxysm,—that cerebro-spinal congestion is the pathological state or proximate cause which gives rise to these symptoms.

3. That the primary cause, the cause, par excellence, or primum mobile of the epileptic seizure is necessarily a something which is capable of rapidly inducing cerebro-spinal congestion.

To us these conclusions appear to be too hastily drawn. No allowance is made for the violence committed upon the system of the dog by the rude exposure of his vital organs. Why was the vena azygos alone not tied to show the effects upon the spinal cord alone, and if congestion existed, why was not this proved by an examination of the nervous centres, after the termination of the experiments? Having thus established the fact that insensibility and convulsions arise from a congested state of the brain and spinal cord, and as insensibility and convulsions are the characteristic and peculiar symptoms of epilepsy, it is thus *incontrovertibly established* that epilepsy arises from congestion of the brain and spinal cord. This is not the novel part of the essay, for Dr. Reid formerly promulgated similar opinions, but our author has the merit of *proving* them in his own way.

In accounting for the congested state of the cerebro-spinal axis, which, he says, exists in epilepsy, our author has promulgated doctrines which are undoubtedly new. He attributes

the epileptic paroxysm to the *contractile power of the spleen*, and has endeavoured besides to expel the darkness which has so long enveloped the function of this organ. That he has failed in the attempt, like all those who have preceded him, we are sorry to say is too obvious. Our author maintains that the spleen is the propelling and regulating power of the portal circulation, and this opinion he grounds upon the consideration of the following circumstances:—

1. That for the reasons already specified, the vis-à-tergo of the heart’s action appears to be inadequate duly to propel the blood through two venous and two capillary systems, and that an additional power is therefore required for its propulsion through the second venous and capillary system—the portal trunk, branches, plexuses, and hepatic veins.

2. That the spleen, by its structure, properties, and position, and by its connexion with the trunk of the portal system by the splenic vein, is eminently adapted for the performance of such functions.

3. Because there is another organ, the function of which is analogous, and the texture of which bears the closest possible resemblance to that of the spleen.

4. Because much more venous blood is returned to the heart by the hepatic veins than there is arterial blood supplied to the digestive organs by the coeliac and mesenteric arteries.

5. Because the spleen is relatively much larger in man than in the quadruped, a greater power being needed for the propulsion of blood through a venous system, the direction of which is vertical, than through one the direction of which is horizontal.

To our mind these reasons are not satisfactory. We have every reason to believe that the heart is adequate to the portal as well as systemic circulation. We have no reason to think that the spleen contracts or has a capability of active contraction. And we have, moreover, the most direct proof that can be obtained that the portal circulation can be continued for an indefinite period without the spleen, and that consequently the spleen is not at all necessary for the effect, for the organ has been removed both from man and inferior animals, without the slightest apparent effect upon the portal circulation.

Dunglison (*‘Elements of Physiology,’* vol. ii., p. 278) says, that Dupuytren extirpated the spleens of forty dogs on the same day, and without tying any vessel, but merely stitching up the wound of the abdomen, yet no hæmorrhage supervened; in the first eight days half the dogs operated on died of inflammation of the abdominal viscera, induced by the operation, as was proved by dissection. The other twenty got well without any accident at the end of three weeks at the furthest. At first they manifested a voracious appetite, but it soon resumed its natural standard. They fed on the same aliment, the same drinks, took the same quantity of food, and digestion seemed to be accomplished in the same time. The faces had the same consistence, the same appearance, and the chyle appeared to have the same character. Dupuytren opened several of these dogs some time afterwards, and found no apparent change in the abdominal circulation, in that of the stomach, epiploon, or liver. The last organ which appeared to some of the experimenters to be enlarged, did not seem to him to be at all so. The bile alone appeared a little thicker, and deposited a slight sediment.

Supposing, however, for argument sake, that our author has *proved* that epilepsy arises from cerebro-spinal congestion, a question arises—how is this congestion superinduced? To this question let our author himself answer.

Viewing the spleen, therefore, as the organ by which the portal blood is propelled through the grand percolator, the liver, to the heart; considering the peculiar properties of the spleen,—its elasticity and contractility; considering the immense size of the hepatic veins, and the proximity of their orifices to the auricle,—a rush of blood entering this cavity from these veins, and preventing ingress by the superior cava, no longer appear an impossible, or indeed an improbable, occurrence. The

spleen is, no doubt, like all other organs, liable to functional derangement; and what is more probable than that in certain individuals it should suffer undue distension; that then, from the influence of some exciting cause, as fear, or other depressing mental emotion, it should act, or contract, either irregularly, or suddenly and with too great force? that the former (the irregular action) by *disturbing the equilibrium of ingress* into the auricle, should cause more or less derangement of the cerebro-spinal circulation, and thus give rise to the numerous forms and gradations of that Protean malady, hysteria? that the latter (the sudden and violent action), by *preventing ingress* by the superior cava, should induce cerebro-spinal congestion, and be therefore the *primary* cause of the epileptic paroxysm?

This may be viewed by some as fine speculation, but to us it appears as the most gratuitous and absurd conjecture—a conjecture founded upon false premises, inconsistent with the well-known laws of the circulation, and totally inadequate to explain either the suddenness of the epileptic attack, or equally sudden cessation of the paroxysm. So much then for our author’s views of the cause of epilepsy.

The last fifteen pages of Mr. Jackson’s work are allotted to the investigation of the *uses* of the thyroid, pituitary, and pineal bodies, the supra-renal capsules, the thymus and Wolfian bodies usually viewed as *vascular ganglia*, but held by our author as *assistant circulatory organs*. He thus announces his views:—

There are, however, other organs besides the spleen and placenta, which are to be regarded as *assistant circulatory*. They are, indeed, when taken collectively, sufficiently numerous to form a class, which may be divided into two orders—active and passive; and which again may be subdivided into genera; namely—permanent and temporary, as follows:—

THE ASSISTANT CIRCULATORY ORGANS.

Active.	
Permanent.	Temporary.
The Spleen.	The Placenta.
Passive.	
Permanent.	Temporary.
The Thyroid, Pituitary, and Pineal Bodies.	The Supra-renal Capsules, The Thymus, and Wolfian Bodies.

The spleen and placenta, by their elasticity and contractility, are the *agents* by which the portal, placental, or diluted venous blood is propelled through the capillaries of the liver, and the hepatic veins to the right auricle; they are, therefore, *active assistant circulatory organs*.

As we consider our author has entirely failed in imparting plausibility even to this part of his subject, we shall confine ourselves to one of these bodies, the *thyroid*. He supposes that it accelerates the currents in those vessels in which the thyroid vein terminates, and thus maintains the equilibrium of ingress into the auricle by increasing the force of the descending current. Our author does not say that the thyroid body has any contractile power such as he imputes to the spleen. He says it is “*passive*,” and that, from the *greater size* of its *capillaries*, the blood flows more quickly through it and hurries on, consequently the more sluggish blood with which it mixes, and thus counteracts successfully that power which he himself has raised up, and of the injurious effects of which upon the descending current to the right auricle he seems to be so much afraid. But even admitting the necessity of an assistant circulatory organ in the neck, we cannot divine how a structure like the thyroid body could act in such a capacity. It seems to us better adapted for retarding than accelerating in any possible way the circulation. The arteries ramify, *ad infinitum*, in its substance before the capillary veins arise, and then form an equally complex net-work before they terminate in the “*thyroid veins*.” The very structure of the organ is, in our opinion, decisive against the theory. It is unnecessary to

follow our author further on this part of his subject, and we have just space for a momentary glance at his peculiar views of the *uses* of bronchocele. Bronchocele is not to be viewed by any means as a *disease*; it is a salutary effort of nature to preserve the equilibrium of the circulation, "of which she is ever mindful." In hilly districts of country, as Switzerland, Wales, Derbyshire, and also in certain hilly towns, as Edinburgh and Nottingham, bronchocele is to be found. Now, hilly countries necessarily give rise, our author says, to great action and corresponding development of the *lower limbs*. But great development of *lower limbs* is accompanied with an increased flow of blood to the auricle by the inferior cava, and a consequent greater tendency to stem back the blood descending from the upper parts of the body. The "equilibrium of the circulation" has thus a tendency to be destroyed, but Nature, "ever mindful to preserve the equilibrium," counteracts this baneful tendency by increasing the size and consequent circulating power of the *thyroid gland*! But enough of this. We take it that Mr. Jackson is a young man, and from that consideration we have been candid and lenient in our observations. His book has some good qualities. It is clearly written; and in the ingenuity that pervades the work, we think we perceive the germ of powers which we hope will lead the author to more successful efforts.

MEDICAL MEMS. OF THE WEEK.

By PERISCOPICUS.

CLUB-FOOT.—The subject of club-foot has in general been so well entered into, that it is hardly necessary to dwell much upon it; nevertheless, the views and practice of Mr. Braid, of Manchester, call for some notice. His opinions, which differ in many respects from those commonly entertained, have been for some time before the public; when a tendon has been divided, and the two ends separated from each other, he has ascertained that these two ends re-unite by fresh tendon, or a substance very like it; and by this means a tendon may be elongated almost to any reasonable extent. He differs from most authors when he states that the best way is to divide all or most of the tendons which are implicated in the contraction; and in the course of four or five days the foot may be brought into its natural position and direction, without the trouble and pain of continuing the extension for the great length of time which often follows the simple division of the tendo Achillis. It will generally be found in a case of pure talipes equinus, with rigid contraction, that not only are the tendo Achillis and plantaris contracted, but also the flexor longus pollicis pedis, and the flexor longus communis, tibialis posticus, and peroneus longus and brevis. Mr. Braid would therefore divide the whole of them at the same operation, or at least those which he found contracted; and his extensive experience warrants him in strongly recommending this mode of proceeding instead of dividing the tendo Achillis alone, and trusting to future long extension to complete the reinstatement of the foot. It seems but reasonable that if other tendons are found proportionably contracted they should be divided as well as the tendo Achillis, especially as the operation is so very simple, and fresh tendon will almost invariably be found to unite the dissevered portions. This, indeed, would enable us to make short work of our operation and astonish our patient, but we should question the propriety of proceeding thus rapidly and almost violently in all cases of the kind. No doubt in many cases Mr. Braid's practice is admirable, for it must be remembered that the

antagonist muscles are in a weak and almost paralyzed state, and can therefore offer but little resistance when the lately extended muscles are again allowed to have play; the consequence will be that the club-foot will either not be completely cured, or the cure will be very tedious. After thus dividing all the contracted tendons, extension is to be commenced in two days, and in four or five days the deformity will generally be cured. In a case of varus Mr. Braid divides the tendo Achillis, tibialis anticus, tibialis posticus, flexor longus pollicis pedis, flexor longus communis, and abductor pollicis, if required; and if there should be much contraction of the sole of the foot, he even divides the plantar fascia as well as the short flexors. But there may be other kinds of talipes, which are owing, not so much to contraction of certain muscles, but to paralysis or weakness of the antagonist muscles; and in these cases Mr. Braid seems to be the first who has excised a portion of such paralyzed or weak tendons for the sake of uniting them again, and thus making them shorter. This has completely succeeded in many cases. It is necessary, however, not to cut out too much, which would produce rigid contraction, nor too little to excite the tone and contractility necessary.—*Mr. Braitwaite.*

TINEA FAVOSA.—Dr. Petel looks upon the absolute removal of the hair as a *sine qua non*. His remedies are 12 grains of soda of commerce, 4 scruples of calx extinctum, and 120 scruples of lard, made into an ointment. 120 scruples of calx vivum, 8 scruples of powdered charcoal, made into a powder. The hair is cut to within a quarter of an inch of the skin; the scabs removed by linseed meal poultices; the scalp cleansed by alkaline lotions. The diseased parts are then rubbed daily with the ointment, the lotions being repeated every six or eight days. After some time the tinea becomes more rare, and then a pinch of the powder is scattered every second day among the hair, which gradually loses its attachment to the skin, and is readily removed. When the diseased parts are entirely denuded, the ointment is applied every two or three days.

THE PROTO-IODURET OF IRON.—Dr. Dupasquier recommends the following formula for the preparation of the proto-ioduret of iron:—Take 50 grammes (2 ounces, 2 drachms, and 40 grains) of iodine, 100 grammes (4½ ounces and 4 scruples) of iron wire, and 400 grammes (rather more than a pint) of distilled water; cut the wire into pieces an inch long, put them into an emery vessel, add the water and iodine, and stopper it. If required for immediate use, the bottle must be plunged, about ten minutes, into water heated to 175 deg. Fahrenheit, shaking it frequently during the time. The solution must be filtered afterwards, when the liquid will pass colourless. If not wanted immediately, it should be set aside, and the combination of the iron and iodine will take place without the necessity for heat. The solution can be kept for any length of time, for as fast as one portion of the iron, dissolved by the iodine, becomes oxydized by the oxygen of the air, and is precipitated in the state of hydrate of sesqui-oxyde, the portion of iodine thus set at liberty re-acts on the iron wire, and forms a fresh proto-ioduret, to replace that which has been decomposed.

SYMBLEPHARON.—M. Pétrequin, of Lyons, performed a novel operation for the cure of this deformity. A gentleman was affected with pterygia in each eye, caused by chronic engorgement. In 1834, Mayor, of Geneva, operated on him, and the left eye was perfectly cured; the pterygium in the right returned at the end of a month, and was attended with pain and some difficulty in the motions of the

eye. The second time he was operated on by M. Maunoir, but with temporary success. The pterygium returned, and increased rapidly. Ribéri, of Turin, who was next consulted, excised a portion of the caruncle with the pterygium, and applied caustic afterwards. This time fibrous bands formed, causing adhesion of the eyelids to the globe of the eye. These bands were excised by a physician at Chambéry, the operation being followed by large granulations, which were extirpated again and again, and finally repressed by the application of the sulphate of copper and nitrate of silver. Cicatrization took place gradually, but there formed a mass of fibrous bands, disposed fan-shape, the base attached to the internal surface of the two eyelids, the apex extending to and terminating on the cornea, which it partially covered to the extent of two lines (1-6th of an inch). M. Pétrequin saw the patient in this state on the 10th of April, 1841, and on examination found the eyelids bound together and to the eye, by a multitude of dense fibrous bands, which rendered their motion very difficult. When the patient looked outwards to the right he had double vision, as also, but in a less degree, when he looked much to the left. Cold, exposure to the air, reading, and writing, were painful and fatiguing. He could not turn the eye outwards. The new operation was thus performed:—A small curved needle, armed with a double thread, was passed between four or five of the fibrous bands of the lower eyelid and the globe of the eye, and the threads tied, the inner ligature being tied loosely. The operation was repeated next day, the ligatures being placed external to those already applied. The eye was kept immovable, and bathed with cold water and laudanum. On the 15th the adhesions of the corneal side were broken; the part was touched with caustic alum, and a little charpie passed behind. The sulphate of copper was applied lightly the four following days; the other ligatures separated later; the lower eyelid was set at liberty, and became free and mobile, and a cure was effected. A similar operation was afterwards performed on the bands of the upper eyelid, but the results were not so successful.

VAN GESSCHER'S BOUGIES.—These consist of a strip of parchment rolled up so tightly that its layers adhere firmly to one another, and they have at one end of it a drop of glue or knob, made of boiled parchment. This knob contributes very much to the facility of introducing the instrument into a stricture; one can feel it slipping in, and then, by the heat of the urethra, it melts, and the bougie unrolls of itself, while the melted glue is retained without injury to the urethra, and does not possess the slightest degree of any irritating quality.

GONORRHOEA.—M. Rousf, of Bagnères, has cured a hundred cases of gonorrhœa, taken at the commencement, with the chloruret of lime, given internally, and used as an injection. The latter is made with twenty-four grains of purified chloruret of lime, four scruples of Sydenham's laudanum, and two hundred and ten scruples of water, and is used three times a day. The pills contain two grains of the chloruret, and one grain of the gum extract of opium each. Six of these are given in the course of the day. The patients are directed to drink largely of *eau sucrée*.

FRONTAL POLYPI.—M. Bonyer, of Saintes, has published a curious instance of polyp, which formed in the frontal sinuses, the result of a blow between the eyebrows; they made their way through the middle part of the left orbital arch, and then placed the upper eyelid on the stretch so as completely to close the eye. Both the nares were blocked up by them. They were removed partly from the forehead after

the ablation of the anterior paries of the frontal sinuses, and partly from the nares. Two large ivory exostoses added to the difficulties of the operation, and were removed. The patient resumed his work as a blacksmith on the tenth day, and seven weeks after the operation the cicatrix was perfect, there remaining only a large depression between the eyebrows.

LARGE DOSES OF OPIUM.—Dr. Golding Bird related to the Westminster Medical Society, the case of a lady, twenty-six or twenty-seven years of age, who had suffered for several years from an acute pain, coming on in paroxysms, in the region of the kidneys and loins, and for the relief of which she had resorted, seven years since to morphia. She had two years since increased the dose to ten grains of acetate of morphia three times a day; she had continued that dose to the present time without any obvious ill effects; all the functions seemed to be properly carried on, and her appetite was good; there was no sign of organic disease present. He suspected the case to be one of hysteria.

STATISTICS OF FACE PRESENTATIONS.—Out of 20,517 cases attended by Mad. Boivin, 74 were face presentations; of 22,243 attended by La Chapelle, 103 were face cases; of 17,000 attended by Kilian, 122; of 6,553 by Boer, 58; of 10,742 by Dubois, 30; of 10,317 by Clarke, 44; of 16,654 by Collins, 33; and of 4,666 attended at Guy's Hospital, 24—making a total of 488 face presentations out of 108,694 cases, or one in every 222 cases.

CANTHARIDES.—M. Martin recommends placing the cantharis, either entire or in powder, in rectified sulphuric æther, in the proportion of five parts of the fly to one of æther, in bottles stoppered with emery; and asserts that the cantharides thus prepared can be kept for three years. The æther does not act except as a preservative.

ACCOUCHEMENT.—A common impression in face presentations is, that the delivery must necessarily be tedious, and of long duration. This certainly is incorrect. In the Dublin hospitals five cases terminated within an hour, eight during the second hour, and fourteen between the third and sixth hour. In Guy's Hospital practice, thirteen terminated within twelve hours; nine within eighteen hours; and of the remaining two one, lasted twenty-one hours, and the other twenty-nine.

TURPENTINE IN NEURALGIA.—M. Martinet states, that it is chiefly in sciatic and crural neuralgia that this medicine is most likely to succeed; but it may also be had recourse to with advantage in neuralgia facialis, and in that form which affects the superior and inferior extremities. The oil of turpentine is always indicated, when the neuralgia does not depend upon an organic disease or alteration, nor on a constitutional principle, seated in the sciatic nerve—such as the virus of syphilis, which must be expelled by mercurial treatment. The chances of success are greatest when all the characters proper to neuralgia exist—such as acute pains, a tracing by it of the course of the nerves, and violent and quickly succeeding paroxysms; and this remark is applicable to the disease, chronic or acute, and whatever means have failed.

CASTOR OIL.—Sir C. Bell speaks very favourably of this medicine in cases of neuralgia. He first ordered it under desperate circumstances, in the most severe case of pain in the cheek, and the effect was immediate, the relief perfect and permanent. It was equally successful in cases of *Tic Douloureux*. What then, Sir C. asks, would be the conclusion of any inquiring mind, when he found a peculiar purgative acting powerfully, but not more so than other forms previously given, attended with im-

mediate and permanent relief of symptoms? His impression was, that it acted directly on that portion of the canal, the irritation of which, or, as Mr. Abernethy would have said, "the discontented state of which," produced the remote pain. Sir C. B. referred to a patient who had been subject to *tic douloureux*, and who had been more than once cured by castor oil of his pain, who died last summer. There was not any disease in the nerve, but ulceration was found in the mucous coat of the ileum. Excision of the nerve, and the endermic mode of using strychnine, are also had recourse to in similar affections.

DIGESTION.—Some kinds of animal food are digested with much greater rapidity than vegetable food. Bread and coffee require above four hours and a quarter; fresh beef from three to three hours and a half; salt beef, from three hours and a half to five hours and a half; salt pork, from four hours and a half to six; mutton, from three hours and a quarter to four hours and a half; fowl, four hours; veal, from four to five hours and a half; tripe, one hour; and pigs' feet one hour.

RELATIVE PROPORTION OF NUTRIMENT.—One hundred parts of white French beans are equal in nutritive power to 120 of yellow peas, 148 of farina of cabbage, 170 of farina of carrots, 175 of farina of wheat, 191 of wheat, 193 of French wheat, 200 of rye, 212 of farina of barley, 225 of farina of potatoes, 232 of barley, 246 of Indian corn, 1,096 of potatoes, 1,351 of carrots, 1,446 of white cabbage, and 2,383 of turnips. Those vegetables which contain gluten are the most nutritive bodies, while those which contain no appreciable quantity of this vegetable principle, are comparatively low in the nutritive scale.

BIN-OXALATE OF POTASH.—M. Bodichon relates the following case of poisoning by the bin-oxalate of potash. A physician having prescribed an ounce of tartrate of potash to be taken in two doses, the druggist by mistake gave the bin-oxalate of potash. The patient took the entire dose, and died from the effects induced by the medicine. M. Bodichon made some experiments on animals with a view of ascertaining the precise action of the bin-oxalate, and he found a species of paralysis produced by its administration.

STRICTURE.—Dr. Guillon states, that he has been invariably successful in the treatment of *stricture of the urethra*, even when of a *fibrous* character, by means of incision. This fibrous constriction, which is by many surgeons considered as incurable, has quickly disappeared under this treatment. Although he has operated on about a hundred cases, some of which had been pronounced as perfectly incurable by very able surgeons, he has not yet failed in one instance, nor has he noticed a single case of relapse.

SPLEEN.—M. Bourguery states, from microscopical researches, that the *spleen* is composed of two elements, the one vascular, formed of blood-vessels of a cellular structure, the other lymphatic. The number of small lymphatic glands disseminated in this organ is so great, that collected together they would constitute nearly a third of its size. The lymphatic vessels establish a communication between all these small glands.

SKATE'S LIVER PILL.—M. Gerardin having ascertained that the oil of the skate's liver is employed with advantage in rheumatic and schrofulous affections, subjected this substance to chemical analysis, with a view of ascertaining whether it contained the same elements as the cod's liver oil; and he has found a certain proportion of iodine, which existed in the state of ioduret of potassium.

BOTANIC NOMENCLATURE.—A few years since, nay even now, says Dr. Pereira, many *stems, appendages to stems, and buds*, were supposed to be roots, and were so called, merely in consequence of being subterranean, as if the root was the only vegetable organ which could be developed or exist underground. The terms *fern root, sweet-flag root, ginger root, turmeric root, squill root, and colchicum bulb or root*, are all erroneous. These so-called fern and sweet-flag roots are underground stems, called *rhizomes*; the part called squill root is in fact a *bud*, whose scales are thick and fleshy, and the colchicum bulb or root, as it is called, is neither a bulb nor a root, but a subterranean stem, having a rounded form, and known to botanists as a *cormus*. When cut transversely, it is found to be solid, and by this character may be readily distinguished from certain liliaceous bulbs, said to be sometimes sold for it, and which, when cut across, are found to be scaly or laminated. The terms fruit and seed are also often erroneously used. The fruit of the cardamom is usually called a seed, and though the seeds are distinctly directed in the Pharmacopœia, yet I have repeatedly known the fruits to be substituted. The fruits of the umbelliferæ are commonly sold as seeds, and we still hear the incorrect terms aniseed, coriander seed, caraway seed, &c., used, while the parts meant are in reality fruits. The sooner druggists and dealers cease the use of these erroneous terms, and adopt a more correct nomenclature, the better.

VENTRAL HERNIA.—A beggar, 42 years old, who had led a hard life from infancy, had a large abscess form at the umbilicus, which burst, gave vent to a great quantity of pus, and to a portion of epiploon, which however readily returned on his assuming the horizontal position. The wound cicatrized, but a hernia followed, and, as the man did not wear a truss, it increased in size, and the hernial opening was so large that the hand could be introduced into the abdomen. Some time afterwards a similar abscess formed on the external edge of the right rectus abdominis, followed by a hernia; and this again, in like manner, by an abscess and intestinal rupture on the left side. A year afterwards a fourth abscess formed below the umbilicus, which was succeeded by a hernia of the omentum, which adhered to the vicinal parts, and did not protrude. All this took place without the man leaving work or seeking medical assistance. One day in July last year, after a full repast, while ascending a staircase, he was seized with fainting and vomiting. On examination, it was found that the left ventral hernia had burst, and a portion of the ilium was protruded. M. Pellizo, who was sent for, succeeded in replacing the protruded gut, and cicatrization took place without the occurrence of a single bad symptom.

TRICHINA SPIRALIS.—This is a very singular microscopic parasite, dwelling in myriads, sometimes in the muscles of the living human body. It was first described by Professor Owen in 1835. Mr. Wormald, the Demonstrator of Anatomy at St. Bartholomew's Hospital, sent to that gentleman a portion of human muscle, which presented a singular speckled appearance, as if it were mouldy. Mr. Owen found that each speck was a shuttle-shaped cyst, containing a very minute cylindrical worm, coiled up in two, or two and a half, spiral turns. The worm measures, when unrolled, no more than 1-30 of an inch in length, and 1-700 of an inch in diameter, and of course requires, for a satisfactory examination, to be seen through a microscope. The longer axis of the containing cyst lies between, and parallel to, the fibres of the muscle. Fourteen similar instances have since come to Mr. Owen's knowledge.

SCABIES.—Dr. A. T. Thomson says, that the dilute sulphuric acid in large doses is most successful in cases of scabies, &c. It is a remarkable fact that such patients *smell* strongly of sulphur after being *under* this treatment.

MEETINGS FOR THE ENSUING WEEK.

- MON. Botanic Gardens, Chelsea, 9 a.m.
 — Statistical Society, 8 p.m.
 — Medical Society of London, 8 p.m.
 TUES. Royal College of Surgeons, lecture, 4 p.m.
 — Horticultural Society, 3 p.m.
 — Electrical Society, 8 p.m.
 — Chemical Society, 8 p.m.
 WED. Geological Society, half-past 8 p.m.
 THU. Royal College of Surgeons, lecture, 4 p.m.
 FRID. Botanic Gardens, Chelsea, 9 a.m.
 — Royal Institution, half-past 8 p.m.
 — Botanical Society, 8 p.m.
 SAT. Royal College of Surgeons, lecture, 4 p.m.

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COURSE OF CLINICAL LECTURES ON PNEUMONIA.

Delivered at the Hospital La Charité, by Professor CHOMEL.

DIFFERENTIAL OR COMPARATIVE DIAGNOSIS OF ACUTE PNEUMONIA.

1. Active sanguineous congestion of the lung.—

The congestion immediately preceding the signs peculiar to the first stage of pneumonia, deserves to fix our attention. M. Fournet was the first to describe accurately the signs of this state of the lung, having seen them in some cases of pneumonia developed as the primary symptoms. They were the precursors of those phenomena which are considered characteristic of the first stage of the disease. Hence we may conceive the great importance of this study, which will, in certain cases, enable us to adopt a preventive treatment, as well as to discover how far the inflammation tends to invade the parts surrounding those which are already the seat of the disease.

On auscultation we discover, at the first onset, a sign of the greatest importance, which is described by M. Fournet under the name of the *humid viscous râle with continuous bubbles*. This râle, which bears the same relation to the state of congestion as the crepitant râle does to pneumonia, occurred in the whole of the patients, 23 in number, in whom M. Fournet studied this condition of the lungs. This bruit, which is apparently seated in the vesicular portion of the respiratory apparatus, gives to the ear the sensation of bubbles which are formed and accompanied by a peculiar character of humidity, to which is combined a sensation of *viscosity* which leaves the impression on the ear of a slow and difficult or rather incomplete development; in fact, these bubbles do not arrive, like those of other râles, at their full spheroid shape; they reach but a third, or at the most, half of their development, which circumstance is evidently owing to the viscous quality of the liquid which forms them; each bubble succeeds the preceding one, before the first has become rounded and fully completed. These bubbles are rather larger than those of the primitive crepitant râle of pneumonia, and less voluminous than those of the ordinary mucous râle, or of the *rhonchus crepitans redux* which occurs at an advanced period of the resolution of hepatization; they are but few in number, three or four only taking place during each movement of inspiration; they possess but little regularity one with another, compared to those of the primitive crepitant râle of pneumonia. Their form is rather flattened, instead of being rounded; the slowness of their production appears to be owing to the viscosity of the liquid choking up the lung. This slowness of development distinguishes them in an especial manner from those of the primitive crepitant râle of pneumonia, which are produced in puffs and with great rapidity; the humid râle with continuous bubbles co-exists exclusively with inspiration, and especially to-

wards the termination of this stage of respiration; in general, it is so much more marked as the patient makes a stronger inspiration; its delicacy does not allow it to be heard beyond the limits of the congestion which produces it; its seat is variable according to that of the affection on which it depends; it presents but little diversity in its character. The humid râle with continuous bubbles differs as we see from the primitive crepitant râle of pneumonia, from the renewed crepitant râle, from the sub-crepitant râle of pulmonary oedema, and from the sub-crepitant râle of capillary bronchitis. It is distinguished from all these forms by the character of continuity and viscosity of its bubbles, and by their slow and apparently difficult development. In this peculiar râle the respiration and expiration are equally reduced to one-half of their original force and frequency; the cough is dry and slight, and the ordinary signs of bronchitis are totally absent; there exists a slight bronchophonic resonance, but only in those cases where the congestion has become very intense. When there is some considerable degree of congestion, percussion gives a little obscurity in the sound of the chest. On applying the hand upon the chest in some very rare cases, (where the congestion is at its highest degree,) we may perceive a slight diminution in the vibration produced by the voice. A remarkable acceleration of the respiration, and a peculiar expression of the face caused by the difficulty of breathing are presented in all the affected individuals. In those cases where the pulmonary congestion was not absolutely complicated with pneumonia, the following characters constantly existed in the expectoration. The sputa, small in quantity, were of a white colour, almost as much mixed with air as in the natural state, and possessed a slight degree of viscosity. These characters were present in eighteen out of twenty-three cases. Active sanguineous congestion of the lung is not accompanied by pleuritic pain; whenever this symptom appeared, the congestion was found to be complicated with pleurisy or pneumonia. But a sign which appears to depend on congestion, is a feeling of constriction or suffocation which was experienced in every case. This constitutes a most painful sensation, keeping the individual in a state of anxiety and uneasiness which greatly augments the oppression and general agitation. Sometimes this sensation is seated on a level with the congested parts, and at other times it occupies a different region. By means of these signs we are easily enabled to ascertain the exact portion affected by pulmonary congestion. The line of demarcation, however, between the sound and the diseased portions is never abrupt. It is only gradually, and in proportion as we recede from the central point of the engorgement, that the respiration regains its normal characters; at a still greater distance, and over the remaining surface of the lungs, it presents the puerile character.

The general symptoms of this affection are flushing of the face, redness of the whole skin, an appearance of fulness of blood, and a very marked increase of heat over the whole body, but unattended by a febrile character. In the place of fever, we find in simple congestion a well-marked general excitation. The blood, in these cases, never presents the inflammatory *buff*, but merely a solid and resistant clot, which is bathed in a small quantity of serosity.

The usual seat of congestion appears to be the middle third of the posterior region of the lungs; but it may occupy any other point of these organs; its seat may change in the course of its various periods, but M. Fournet has never seen any influence exercised in this respect by the decubitus of the patient, nor has he ever seen this form of congestion arise in individuals who, having been for some time previously confined to their beds, have thus fallen into that state of anemia which disposes to passive

congestions. In six patients, the invasion of active congestion of the lungs was abrupt and rapid, similar to what we usually find in congestion of the brain: the oppression sudden and considerable, with a feeling of suffocation and dyspnoea; there was a sensation of plethora, accompanied by the ordinary local symptoms; a general state of uneasiness, with agitation and fatigue. In these instances the disease was free from all complication. In the greater number of cases, the symptoms of congestion appeared some days after the manifestation of the general state of uneasiness. In other patients various visceral congestions existed at the same time; the one alternately predominating over the other for a various period; but after a certain lapse of time, the signs of the pulmonary congestion appeared in their turn, and acquired at the expense of the others a marked pre-eminence and duration.

Active congestion of the lungs presents three modes of termination—by hæmorrhage, by pneumonia, and by resolution. Of the first there is no occasion to speak. The second appears to be more frequent, and it is probable that every case of pneumonia is preceded by this state of congestion; but it is rare that we are called during the first phases of the disease; and, moreover, the signs which characterise them require great experience in auscultation to enable the physician duly to appreciate them. M. Fournet states that he has several times adopted the following experiment, as harmless, he says, to the patient, as conclusive in proving the nature of the malady. Two patients, nearly equal in strength and constitution, and of almost the same age, entered the hospital together; in both the signs of pulmonary congestion were evident, and it was resolved that the one should be bled freely, while the other was merely subjected to the employment of diluent drinks. The next day, the patient, who had been bled, presented scarcely any trace of the signs noted the day before, while the one who had been left to the natural course of the disease, offered all the symptoms of pneumonia (crepitant râle, bronchial respiration, rusty-coloured sputa, &c.) A second occasion presented itself of repeating this experiment under conditions almost similar, and he obtained precisely the same results. In both these cases, the pneumonia, which was developed, was easily checked. M. Fournet adds, that, according to his observation, when active congestion is transformed into pneumonia, it is generally about the seventh day of the congestion that this change takes place.

Resolution is the most frequent termination of active congestion of the lungs; the signs of the affection, in this case, become gradually less marked, and successively disappear. The bubbles of the humid râle become larger, still more humid, and thinner, and the humid character of the respiration becomes less and less marked, till finally effaced. The number of the respiratory bruits becomes more and more increased, quickly passing its natural limit, and the respiration assumes the exaggerated character in the same parts where it was originally diminished. The phenomena furnished by the touch and percussion disappear first; those furnished by auscultation last.

From the preceding observations, we see that active congestion of the lung may be easily distinguished from the first stage of pneumonia, the only one, in fact, to which it bears any resemblance; its principal differential characters are the humid râle with continuous bubbles (very different from the primitive crepitant râle), the peculiar character of the expectoration, the absence of the febrile condition, &c. Of the passive pulmonary congestion, which results from too-prolonged decubitus on the back, I shall speak when treating of *hypostatic pneumonia*, and of the *passive congestion* preceding it.

II. *Bronchitis*.—It is not my intention to enter into the signs which distinguish pneumonia from ordinary bronchitis; the diagnosis of these two affections is easy. It is, however, different with respect to *capillary bronchitis*. Where this inflammation is intense and very extended, it gives rise to general symptoms, frequently alarming, and sometimes even to a sort of typhoid fever; there is pain in the side, frequent cough, expectoration of semi-transparent and viscid sputa, which adhere to the sides of the vessel; the dyspnoea is extreme; percussion often furnishes a little dullness, and auscultation a vesicular r le which is developed during inspiration; a r le which greatly resembles the crepitant r le, and which in some cases cannot be distinguished from it. But here the resemblance ends. With respect to the distinctions, we shall find, that the sputa, although viscid and semi-transparent, remain whitish, and do not assume the rusty-coloured or barley-sugar appearance; if they contain blood, it is in well-marked streaks; percussion gives only a slight obscurity in the sound, and never a true dullness, unless there be some complication of pulmonary engorgement. The vesicular r le is generally larger and especially more humid than the crepitant r le of pneumonia; it also invariably occupies a large extent of *both lungs*, especially on the lower and posterior parts, whilst the crepitant r le is seated, in the great majority of cases, in but one side of the chest. This sub-crepitant r le is usually accompanied by the sonorous, sibilant, and mucous r les. I may add, that the pulse is frequent, without being so full as in pneumonia; that the blood drawn from the vein is usually devoid of buff; and, finally, that these several symptoms continue for a much longer time than would suffice for a pneumonia to pass from the first stage to that of hepatization. By means of these various characters I was enabled to distinguish pneumonia from capillary bronchitis with considerable facility, during an epidemic which reigned in 1833, and in which the capillary bronchitis was frequently complicated with pleurodynia, and sometimes even with pleurisy with or without effusion. This epidemic presented several of the characters which have been set down by authors as belonging to *false peri-pneumonias*.

III. *Pleurisy*.—The differential diagnosis of pneumonia and of pleurisy is in general easily established; all error will be impossible where the first stage of pneumonia is established; the presence of crepitation will then be perfectly conclusive. When the pneumonia has reached its second stage, we might, unless we consulted the *different orders of symptoms*, commit some error which would be fatal to the patient; by mistaking, for instance, a pneumonia for a pleurisy, and hence neglecting to employ an energetic treatment in those cases where such a system is absolutely necessary. In fact, in pulmonary hepatization as in pleuritic effusion, we find a dullness on percussion, bronchial respiration, and a certain degree of resonance of the voice, at the same time that the respiratory bruit is absent. But, where the effusion is free, the dullness is displaced in the various positions of the patient, the liquid moving into the most dependent parts. In making this examination, we must bear in mind that the fluid is not immediately displaced, but that a variable period is required, which is in proportion to the degree of resistance offered by the lung. Where we find on the posterior and inferior parts of the chest a dullness and bronchial respiration, which are equally characteristic of effusion and hepatization, if the case be one of effusion, on ordering the patient to lie on his abdomen, the liquid will gain the anterior or lowest part; the dullness and bronchial *souffle* will disappear from behind, and give place to the normal phenomena; if the patient, still lying on his belly, be drawn to the edge of the bed, percussion, when practised on the anterior part of the chest, which is now most dependent, and which previously gave a clear sound, will furnish a dullness caused by the displaced liquid. It will be necessary to avoid confounding this anterior dullness with that caused by the heart, which, when the patient is lying on his abdomen, is brought nearer to the anterior wall of the chest, and in fact touches it for some considerable ex-

tent; but, on applying the hand upon this region, we shall discover the palpitations of the heart to be more superficial as well as more powerful, and thus remove all doubt. The dullness owing to pleuritic effusion is more marked than that of the second or third stage of pneumonia. The degree of resistance is also much greater in the case of effusion; in fact, this difference is so marked, that some practitioners affirm that, by percussion alone, they can distinguish these two affections. In pneumonia, it is very rare that we do not find in the hepatized portion of the lung some crepitant bubbles scattered here and there; and another character of the greatest importance is, that we hear the pneumonic crepitation towards the circumference of the hepatized region; bronchial respiration is heard much more rarely in pleurisy than in pneumonia, and when it does exist, it is much less intense; this difference probably arises from the compression which the effused fluid exercises on the large bronchi. The resonance of the voice is often broncho- gophonic in pleurisy and in pneumonia; but in general pure bronchophony attends pneumonia while  gophony is characteristic of pleurisy. Again, according to M. Cruveilhier, the puffing respiration, the bronchophony, &c., are obscure in pleurisy, but pure and well-marked in pneumonia. The application of the hand to the thoracic parietes will furnish, according to some authors, very distinct differential signs; in pneumonia, the vibration of the parietes will be preserved and even augmented; it will, on the contrary, disappear in pleuritic effusion. My own observations do not bear out this remark; the vibration has to me appeared absent in both affections. On inspection and mensuration of the thorax, in cases of considerable effusion, we find a state of dilatation which is altogether wanting in pneumonia. In its progress, the effusion almost constantly occupies the inferior and posterior regions of the thorax, and then extends upwards and forwards; pneumonia, on the contrary, generally attacks the summit of the lung, and spreads from thence downwards and backwards. Lastly, pleuritic effusion, when very abundant, displaces the vicinal organs, pushes the heart backwards towards the right or left side, and the spleen and liver downwards; these phenomena are never produced, at least to so great a degree, by the hepatized pulmonary parenchyma.

The functional signs also furnish useful distinctions between these two diseases. The cough is almost constant in pneumonia, it is very frequently absent in pleurisy; the sputa are formed of saliva and mucus in pleurisy, and are but small in quantity; while in pneumonia they are characteristic. The dyspnoea is generally but little marked in pleurisy, the patient often experiences no sensation of constriction, and continues his ordinary labours with facility; in pneumonia, as we have seen, dyspnoea is almost always present, and is generally in proportion with the intensity and duration of the inflammation. Pain, which some have said might serve by its acuteness to distinguish pleurisy from pneumonia, has lost much of its importance since the researches instituted by M. Louis have been made known. This acute observer found pain of a severe and limited character in but three or four out of forty cases of pleurisy; in two-thirds of them it was but little marked, and the patients would not have spoken of it unless their attention had been especially directed to this point. In pleurisy, the general symptoms are feeble or absent; there is scarcely any fever, or it exists only at the commencement of the affection, and easily yields to blood-letting; the pulse is small and contracted in pleurisy, while it is fuller in pneumonia; the expression of the face is natural in pleurisy, but more or less altered in pneumonia; in pleurisy, although the effusion often occupies the half or two-thirds of the thoracic cavity, the patient will ask for food, get up and frequently leave the hospital, and it is not uncommon to find effusions of this nature in men who enter the hospital for some other disease. In pneumonia, on the contrary, the general phenomena are intense and prolonged, and establish one of the most important distinctions between the two diseases. The duration of pleuritic effusion is very long, and almost indeterminate, while pulmonary

hepatization quickly terminates either fatally or favourably. The commencement of the two affections is also very different; it is usually obscure in pleurisy; the pain, if it exist, does not compel the patient to leave his work, and the commencing shivering fit is neither remarkable for its force nor duration; thus, pleuritic patients do not in general come to the hospital till some time after the commencement of the malady. In pneumonia, on the contrary, the shivering fit at the commencement of the disease is prolonged, and there is great debility and uneasiness from an early period of the affection. In pleurisy, the dullness appears very quickly, sometimes within a few hours from the first attack of the inflammation; it also rapidly acquires its highest degree; in pneumonia it appears gradually, and at a later period; in pleurisy it extends rapidly; in twenty-four or forty-eight hours, it sometimes affects the whole of one side of the chest, whilst it very rarely attacks an entire lung in so short a space of time; the bronchial respiration offers the same characters. We see, then, that the period of the disease, at which we are called, exercises a great influence over the diagnosis. When all the differential signs just mentioned are combined together, the diagnosis of the two affections presents no real difficulty; but some cases of pneumonia occur without either the characteristic expectoration, well-marked dyspnoea, crepitation, or intense fever; as, on the other hand, there are some cases of pleuritic effusion which are accompanied by great dyspnoea and fever, and in which the various positions of the patient produce no difference in the phenomena heard by auscultation, on account of the liquid being imprisoned by the adhesive processes which are formed; there are also cases of effusion, in which the thoracic parietes are not remarkably dilated, and in which the various viscera are not pushed out of their place; but I may assert that such cases are exceedingly rare, and also that the progress and duration of the affection are not long in clearing up the diagnosis. But, where doubt exists, we should treat the case as one of pneumonia.

Let us now suppose an instance where one lung is entirely hepatized; we shall find, as in effusion filling the whole of one pleura, dullness on percussion; but in the case of hepatization, we shall very probably discover, with attention, some degree of crepitation; bronchophony and bronchial respiration will also exist, but would be wanting in pleuritic effusion; the expectoration would also be characteristic in hepatization of so extended a degree; and if this kind of expectoration were wanting, auscultation would discover the accumulation of mucus in the bronchi. But what would especially contribute to clear up the diagnosis, would be the general symptoms (fever, alteration of the countenance) and the functional disturbance of the respiratory apparatus (dyspnoea and cough), which would be very intense in pneumonia of so great an extent.

ON THE EXHIBITION OF INSPISSATED OX-CALL IN VARIOUS DISEASES.

By CHARLES CLAY, Member of the Royal College of Physicians, London, &c., &c., Lecturer on Medical Jurisprudence &c., Manchester.

[For the 'Medical Times.']

CASE G.—Mrs. L.—d, also a painter's wife, 28 years of age, accustomed to weighing out white lead paint to the workmen for five or six years past, during which time she has been subject to obstinate constipation of the bowels, averaging one movement in seven days. It was with great difficulty that motions were procured oftener by medicines of any kind, although she had tried numerous applications, and then with great pain and sickness; the motions when passed were like hardened white marl, evidently characteristic of a deficiency in the bilious secretion. I may here also state the same appearance of the evacuations accompanied those of case F. I ordered twenty-four grains of the inspissated gall per diem; the very day after, her bowels were freely and copiously moved, and have continued perfectly so since, after taking the gall for a fortnight; she reduced the doses from three to one per diem; that is, eight grains every morning for three weeks longer. It is now only taken occasionally, the bowels are

quite regular, and as in the cases before stated, not the slightest feeling of pain or sickness occurred during its exhibition, the parties taking it experiencing no symptoms of being under the influence of even the simplest laxative medicines.

CASE 7.—John D—t—n, a working painter, æt. 30, in the habit of sleeping in the workshop for the better security of his master's property; had been subject to constipation of the bowels since he was an apprentice to the trade (about fifteen years); motions only occurring about every seventh or eighth day, and then of a chalky indurated character; his countenance was sallow, appetite bad, and he had frequent attacks of the colica pictonum. I commenced treatment in this case by giving the oleaginous mixture as in case 5, but with little effect, and that at the expense of great pain and sickness; the motions procured were hard, knotty, and very small in quantity. I then ordered thirty grains of the inspissated gall per diem; on the second time of his taking it, the bowels were copiously moved without an unpleasant symptom; he has taken it about a fortnight, and the bowels are now quite regular, and the motions of proper consistence; he expresses himself more comfortable in his feelings, with a better appetite for food than he has experienced for many years.

In addition to these cases, I may mention I have given it in the common constipation attendant on pregnancy with the best effects.

Observations on Cases 4, 5, 6, 7, &c.—I cannot reflect on the effects of the inspissated gall in the cases 4, 5, 6, 7, &c., without great satisfaction; since it proves, as I anticipated, a most valuable adjunct to our means of improving the condition, and correcting the mischiefs, of the alimentary canal; and as the diseases connected with it are evidently either entirely cured or very much ameliorated by its exhibition, I think there can be no doubt that where obstinate constipation exists, whether it be the cause, or the consequence of the present abnormal state of the system, it arises either from a vitiated property of the bilious secretion, or a deficiency as to the quantity secreted; if so, the substitution of inspissated healthy bile must improve the condition, and the quality of what is already in the alimentary canal, producing also a proper effect on the fecal mass; if there be a mere deficiency in quantity, the introduction of an additional supply must better answer the intentions of nature in performing her excretory operations. If I take the whole range of cases hitherto introduced as illustrative in this essay, *deficiency in quality or quantity of bilious secretion is the prominent and prevailing accompaniment*. If I were asked how the inspissated gall acts so as to procure a more soluble state of the fecal mass, in such cases as cited in Nos. 5, 6, and 7, I should say distinctly, neither as a laxative, purgative, nor drastic, all such producing, to a greater or less extent, a stimulus to the intestinal coats, exciting them to propel their contents and to excite an extra secretion from the exhalents (the latter action, however, in my mind, is rather questionable); such is the generally allowed operation of the various degrees of cathartic medicines, and the common consequence arising from taking such is nausea, sickness, griping pains, &c., more or less, according to the character and dose of the medicine employed. Inspissated gall, on the contrary, produces not the slightest pain or sickness, and yet a motion can with equal (or greater certainty) be relied upon, and that in a form most easy and natural for propulsion. It is evident its action is not as a cathartic, but as a direct solvent to the accumulated hardened fecal mass, the consequence of deficiency of quality or quantity of bile in the alimentary canal; as such, its effects may be produced without pain or uneasiness, which would not be the case if its action was on the principle of cathartics. I shall, in my next communication, show the effects of inspissated gall in diseased livers, dropsies, and in that numerous class of diseases arising from acidity in the first passages of children, with some experiments on the bile and fecal matter.

In continuing my practical observations on this question, I would remark that the constipation

attendant on working in frequent contact with white lead, would lead to the conclusion that it had a direct tendency to arrest the secretion of bile, not only as to quantity but quality, so as materially to impede the healthy process of digestion and excretion of fecal matter. I have never yet seen a case of painters' constipation without the white motions indicative of this deficiency. The cases 6 and 7 are examples of this. In respect to case 5, though frequently in contact with white lead, yet the habitual constipation had been observed from infancy, and therefore could not be directly attributed to the effects of lead, as the same deficiency of bile had been observed in the motions from her earliest recollections. The case was one of the most obstinate character, and no doubt rendered worse by the husband's occupation, in which she assisted. It appears to me contrary to common sense to attempt to evacuate the intestines of fecal matter by drastic purgatives (except by those of an oleaginous nature), the inner coat of the intestines being almost destitute of mucous secretion, and the feces hardened by the absence of bile; an attempt to move the bowels by drastics under such circumstances must endanger inflammation. But if (as I shall afterwards prove) ox-gall directly dissolves the hardened feces, and by that action alone renders them easier of propulsion, by the addition of bile I directly overcome the constipation, and by charging the system with an extra quantity of healthy bilious secretion I prevent its recurrence, giving time for improving the secretory powers of the liver by other remedial measures. In cases of constipation produced by the exhibition of opium, it is always remarked that the motions are clay coloured, evidently proving that less bile is secreted than ought to be, opium having a more decided effect on the secretion of the liver than that of any other organ in the body; hence (the bilious secretion being checked, or materially diminished by the presence of opium) follows that obstinate and frequently mischievous constipation so often met with in practice, and more particularly in children, who are so often crammed with sleeping nostrums. When I have found it necessary to employ opium in the treatment of disease where I wished to avoid its peculiar tendency to constipate the bowels, I have always succeeded by combining it with the inspissated gall, which in no way impedes the desired action of the opium, whilst it is an effectual preventive to its confining the bowels.

CASE 8.—William Macartney, æt. 56, had a constantly irritating dry asthmatic cough, which only gave way to the pil. seillæ comp. e. opio at bed-time in large doses; but in consequence of their tendency to confine the bowels, he was obliged to omit them, to the great sacrifice of his rest and comfort, and take purgatives. I ordered him eight grains of inspissated gall every morning, and the pil. seillæ comp. e. opio at bed-time; from the commencement of his taking the gall pills the bowels became quite regular, and have remained so ever since: thus the gall perfectly counteracts the constipating effects of the opium, whilst its sedative effects appear in no way diminished.

In addition to the cases already enumerated, I might add many others of dyspepsia in treatment and result so nearly like my own (case 4), that a repetition of particulars will, therefore, be unnecessary; suffice it to say, they have all been effectually relieved by the same means, their stomachs and bowels assuming a regularity quite new to them, without any apparent effort, or causing the least uneasy symptom.

The following cases are in connexion with extensive organic disease of the liver, in which the inspissated gall was of considerable benefit in preventing the strong tendency to constipation which existed.

CASE 9.—Mrs. P—t—ton, æt. 65, for a long time affected with a schirrous affection of the liver, with great enlargement of that organ; the bowels often very torpid, motions chalky, and when so, suffered severely from pain, loss of sleep, &c. Independent of other treatment, I gave the inspissated gall to the extent of eight grains night and morning, and it was very remarkable how much

more regular the bowels immediately became under its influence; and though the organic disease was too extensive for any permanent relief, yet the ease she experienced from her bowels being more regular, was a sufficient inducement for her to prefer taking the inspissated gall pills to any other remedy previously tried, which indeed had scarcely any effect at all upon her.

CASE 10.—Anne C—l—n, æt. 30, had chronic inflammation of the liver, accompanied by obstinate constipation, whitish motions, &c.; after leeching, blistering, hydrarg. chlorid, &c., the obstinacy of the bowels still existed. I then ordered eight grains of the inspissated gall every night and morning. Immediately a great change manifested itself in the appearance of the motions, and perfect regularity was established, with a slight increase of urinary secretion (*the only adult case in which I had observed any distinct action on the kidneys*). The case is now quite well, not the slightest trace of the liver affection remaining. In addition to cases of this description, I might add the opinion of Dr. S. Johnson of this remedy, as recorded in the *Lancet*, vol. 1, 1840-1, page 447, where he states from fifteen to thirty grains per day had been administered by him with the best possible effect in bad cases of jaundice; it was indeed this statement that first induced me to test its merits at greater length, in which I have not been disappointed. In respect to the action of ox-gall on the kidneys in adults, I very much question its utility, as I have not been able to perceive any increase of urinary secretion in the foregoing instances except in case 9, and that very limited, and which might with equal propriety be attributed to any of the other means employed, I therefore do not think it promises much in cases of dropsy. The high authority, however, of Boerhaave, as quoted at the commencement of these observations as to its effects on children, increasing the secretion of urine, cannot be passed over. I have not given it to marasmoid children to that extent to speak decidedly; but in the cases in which I have had an opportunity of exhibiting it, I have observed a decided and marked improvement of the system—the tympanic state of the belly reduced—appetite improved—motions of a bilious character—and an increase of urine. In all cases of marasmus, whether of children or in the atrophy of adults, I have in ox-gall a valuable remedy. In acidity of the stomach, &c., of children, it is of most decided, effectual, and immediate relief. The curdled vomitings, green motions, abdominal gripings, and restlessness immediately disappear, and a better state of general health is substituted; in all such cases there was a decided action on the kidneys, increasing the secretion. On looking at its effects upon children as just stated, particularly whilst at the breast, living almost entirely on milk, the result is not different to what we might suppose when considering the experiments of Baglivi, Lewis, &c., "*That it prevents milk from turning sour, and dissolves it when in a state of coagulation*," an antacid preparation is indicated, which is one of the peculiar properties of this remedy. To show its direct effect upon hardened feces, a child of sixteen months old passed a very hard motion with very great difficulty, not having had one for three days. I poured a solution of ox-gall over it in a vessel, immediately its chalky appearance was changed to a more healthy bilious colour, and reduced to a pulpy mass in half an hour; from this fact, I will suppose a case, (one which has frequently occurred in my practice,) an adult with hardened feces in the rectum, almost, if not impossible, to pass without assistance; under such circumstances, what could afford a better prospect of relief than two or three ounces of recent gall, diluted with as much water, used as an injection. It is needless to observe I would pledge myself as to the result, viz., an immediate softening of the mass facilitating its propulsion.

So far as these experiments have progressed, the use of ox-gall in some diseases is of the most satisfactory character, presenting us with an excellent and peculiarly effective corrective for the many and various derangements of the alimentary canal, unlike many of our best medicines, inasmuch as in whatever cases it is given, if no benefit results, no harm is ever experienced from it. Its action on

the system is not as a purgative, but as a mere solvent of the *material* contained within the intestinal canal, producing no excitement to propel, but by liquifying the mass, facilitating its excretion. It is also a tonic—and in children, to a moderate extent, a diuretic—but less so in an adult. It appears to have a peculiar and specific action on all that variety of diseases connected with derangements of the digestive organs, and from the proofs I have advanced, I believe it worthy of extensive trial. The preparation I have been in the habit of giving, is simply the recent gall of the ox slowly evaporated to the consistence of an extract, and afterwards made into pills, as in the formulae already given; but if it is sufficiently firm, I prefer the simple extract made into pills without any addition; and if the gall be *recent*, it has very little smell, but an intensely bitter taste. The gall bladder of a moderate sized ox will afford as much extract as will make one hundred four grain pills, and is an article both cheap and easy to procure. Trusting it may be further tested by others, I leave it to the profession, confidently recommending it to their notice.

THE PHYSIOLOGY OF ANIMAL SUSTENANCE.

(Continued from p. 19, No. 133.)

[IN consequence of our printer's mislaying a portion of the MS. of this paper, we published the case of Ann Moore before those which in chronological order ought to have preceded it; the reader will therefore have the goodness to look to No. 124, p. 220, and then the following cases will be understood.]

We come now to particular cases, which to a certain extent are undoubtedly authentic, and without delaying to arrange them in chronological order, we take them as placed in our note-book, and the first case is that of MARY THOMAS, of Barmouth, recorded by Pennant. After giving an account of his voyage, &c., our author says, he found her of good countenance, very pale, thin, but not so emaciated as he had expected to see her. Her eyes were weak, her voice low, her lower extremities paralyzed, and she was bed-ridden, yet her pulse was strong, (comparatively?) her intellects clear and sensible, her age 47. On inquiry, our author learned that she was attacked with an eruption similar to the measles at the age of 7. From this she recovered, but at 27, the same disease returned, and with such violence that for two years and a half she continued insensible, and took no kind of nourishment whatever, though her friends attempted to force open her mouth to give her food. During this period she threw up vast quantities of blood. She recollected the return to her senses, said she knew every one about her, and asked her mother if she had given her anything to eat the day before, as she felt very hungry. Meat was brought her, but she could not taste it, and with difficulty swallowed a spoonful of thin whey. From this time she continued to exist for 7 years and a half without food or drink, excepting a little water to moisten her lips; at the end of the 7 years and a half, she again fancied herself hungry, and begged for an egg, of which she eat as much as was compared in size to the kernel of a nut. About this time she took the sacrament, by having a crumb of bread steeped in wine. When Pennant saw her, she eat daily a bit of bread weighing about 2 drms. 7 grs., and drank a glass of water—and sometimes she took a spoonful of wine; but she frequently abstained whole days and nights from taking either food or drink. Her sleep was indifferent, and the ordinary egesta were very small and seldom present.*

Another remarkable case is that of Gilbert Jackson, of Carse Grange, in Scotland. This subject was 15 years of age when attacked with fever in Feb. 1716. From this attack he partially recovered, and lived to the 16th of June, 1719—3 years and four months—without food or drink, but sometimes washed his mouth with water. On the 10th of June at night of the same year, namely, 1719, his father persuaded him to take a

spoonful of milk boiled with oatmeal, but he was nearly choked by it. From that period he took food, but so little, that a halfpenny loaf served him for eight days. During the time he fasted, he had no evacuations, and it was fourteen days after he began to eat before he had any.†

Another very extraordinary case is that of John Ferguson,‡ of Argyleshire, who happening to overheat himself on the mountains in pursuit of cattle sometime in the year 1724, drank copiously of cold water from a rivulet, near which he afterwards fell asleep. In 24 hours he awoke in a high fever, during the paroxysms of which, and up to the period when the account was written, (1742) he could retain nothing on his stomach but water, or very thin clarified whey. Archibald Campbell, of Inverliver, to whom Ferguson's father was tenant, distrusting the report, locked him up in his own house for twenty days, supplying him himself with fresh water, but in no greater quantity than a healthy man could drink, at the same time taking care that he should have no kind of food whatever, "yet after that space of time he found no alteration in his vigour or visage." We are further told that he was then 36 years of age, of middle stature, with a healthy though not seemingly robust complexion—that his body was spare and meagre, but not remarkably so—and his ordinary employment running after cattle, which obliged him to travel four or five miles a day in a mountainous district.

Dr. Mackenzie published the case of an unmarried woman named Janet M'Leod, of Kincardine, Ross-shire, 33 years of age, whose powers of abstinence were very surprising. It appears she enjoyed good health till the age of 15, when she had an attack of epilepsy; at 19 she experienced a second attack, which lasted 24 hours, and several days after she was seized with fever, which continued many weeks, and the convalescence was tedious. Shortly after she took to her bed, complaining of pains in her head and heart, after which she never rose out of it, unless when lifted—seldom spoke, and had so little craving for food that her parents could only get her to take a small quantity on compulsion. But as the disease advanced, she refused even this small quantity, and her jaws became so fast locked by Whitsuntide, 1763, that it was difficult to open her mouth so as to admit a little thin gruel, or whey, "of which so much run out at the corners of her mouth, that they were not sensible that any portion of it had been swallowed." About this time, says the author, they got a bottle of water from a medical spring in Brea-mer, a part of which they attempted to make her swallow, but without effect. They rubbed her jaws, however, with the water, and on the third morning after, during the application, she cried out "give me more water," when all that was remaining of the bottle was given her, and she swallowed it with ease. These were the only words she had spoken for upwards of a year, but she continued to mutter for twelve or fourteen days. After this she ceased to speak, and rejected as formerly all kinds of meat and drink till July, 1765, when a sister of hers thought that by some signs she made that she wanted her jaws opened, and this was effected by aid of a horn-spoon. She then distinctly articulated, "Give me some drink," and drank at one draught about a pint of water. She was then asked why she did not make some sign, if she could not speak when she wanted drink? When she answered, "why should she when she had no desire for it?" She remained during this period quite sensible.

On 21st October, 1767, Dr. Mackenzie carefully examined this patient, and obtained then, it would appear, the above results; and in October, 1772, hearing that she was recovering, he visited her again, and learned that about a year preceding, her parents, returning from their labour, found her

sitting on her haire on the side of the house opposite her bed-place, spinning with her mother's distaff. This surprised them, as they had left her in bed. However, from this time her wretched condition seemed to improve, for Dr. Mackenzie was informed that she sometimes crumbled a bit of oat or barley cake in the palm of her hand, as if to feed a chicken, and putting little pieces of this into the gap of her teeth, rolled them about for some time in her mouth, and then sucked from the palm of her hand a little water, whey, or milk which had been poured into it. This was done once or twice a day, but always on compulsion. The egesta were equal to the ingesta. She never attempted to speak. Her jaws were still locked, her hamstrings rigid, and her eyes shut. Her countenance was ghastly, her complexion pale, her skin shrivelled, her person emaciated, her pulse scarcely perceptible, and when her eyelids were lifted up the balls were found turned backwards and upwards in the orbits. With the exception of taking food, she appeared tractable and sensible in all things, and at the request of her visitor spun with the distaff, and crawled about on her hams; but when requested to eat, she manifested the greatest reluctance, and could only be induced "to take a few crumbs enough to feed a bird, and to suck half a spoonful of milk from the palm of her hand."* It is to be regretted that we have no further account of this very interesting case.

Pennant, in his Tour in Scotland, 1772, (London, 1776, 4to.) mentions another fasting person of the name of Catharine M'Leod, of Kincardine, Ross-shire, and either this is the same whose case we have just related, or she was a relative. He says she was 35 years old in 1769, and that up to that period she had neither eat nor drank for three years and three-quarters. Her forehead was wrinkled, but her cheeks were blooming and red. She slept a great deal, perspired sometimes, and now and then threw up large quantities of blood from the lungs. We should be inclined to think this was only another version of the former case, but that the christian names are different, and that the latter was "blooming," while the former was "ghastly," and her complexion "pale." Not to dwell too long on this note, we briefly allude to a case of trismus from cold, with suppression of catamenia, &c., which was cured by acupuncture. The patient lived for many months on the very little that could be sucked through the gap of a tooth, which tooth had been removed, we think, by advice of Mr. Liston. We regret that we have lost the notes of the case. To Dr. Lister, however, of Edinburgh, is due the merit of treating this patient successfully after she had been abandoned by the faculty.

Another very curious case is that of the girl of Osnabruck,† 16 years of age, who fasted two years under very peculiar circumstances. Dr. Smidtman's account of her case we thus abridge:—She enjoyed good health until she was 10 years of age, when she was seized with epilepsy. From that time she was mostly confined to bed, especially in winter. From February 1798, the alvine and renal secretions began to cease, though she occasionally took a little nourishment. From the beginning of April of the same year, she abstained entirely from all food and drink, falling into an uninterrupted slumber, or more correctly speaking a comatose state, as the narrator says she was almost senseless, from which she only recovered for a few hours from time to time. Her sensibility during her waking moments was so exquisite, that the slightest touch on any part of her body brought on partial convulsions. In this state she had continued nearly ten months when Dr. Smidtman first saw her. This was in March, 1799. Though she had not eaten anything during this period, she appeared fresh and blooming.‡ For the last two months pre-

* Phil. Trans. for 1777; also Clarke's Readings in Philosophy.

† See Hufeland's *Pract. Journ.*, vols. viii. and ix., No. 2, and a pamphlet published by Dr. Schmidtman, of Melle; also the *London Med. and Physical Journal*, vol. iv., p. 87.

‡ The appearance of bloom upon the countenance, even after death, is not unfrequent. Byron has very beautifully alluded to this fact.

* Journey to Snowdon, vol. ii. p., 105-7.

† This case will be found at length in the vol. of the Phil. Trans. for 1720. It is related by Dr. Patrick Blair, who was imprisoned in 1715 for his attachment to the Stuart family. See Pulteney's Sketches of the Progress of Botany in England.

‡ Related by Robert Campbell of Kernan, Phil. Trans. vol. for 1742.

vicious to Dr. S.'s visit, the intervals of sleep, or coma, had been longer, and her senses and sight were natural, but her sensibility she had lost, as she could bear pinching without seeming to feel pain. Her gums bled frequently, and her pulse was scarcely perceptible at the wrists, though the carotids beat strong and full, about 120 a minute. Dr. Smidtman endeavoured to make her drink some milk, but she declared she could not swallow it. The alvine and renal secretions had entirely ceased. To remove all doubt of imposture, six sworn men were appointed to watch her, and at the end of fourteen days they gave evidence on oath, that during that period she had neither taken food nor drink, nor had any ejecta been observed. She had been seized, however, during this period of observation, with convulsions, after which fever supervened, but which, it would appear, had ceased on a very profuse perspiration breaking out all over the body, which possessed, says the narrative, the singular property of turning water black.* When Dr. S. saw her again, she had quite recovered, and was not at all emaciated, but was rather lustier. Her gums still frequently bled, after which she was generally attacked with weakness; her sensibility to touch had not returned, but her memory was unimpaired, and she occasionally amused herself with reading and writing. No exertions had taken place. During a severe winter she could not endure the heat of a stove. It made her faint. In concluding a very careful report of this case, Dr. Smidtman appends an opinion that she drew by re-absorption such alimentary particles from the air, as were sufficient for the nutrition of the body, and that the excretions were likewise replaced by the skin.†

We are told of four colliers who were confined twenty-four days in a coal-pit at Herstol, near Leige, and who lived during that period entirely on water. It being supposed that the water contained some nutritive matter, two bottles were "evaporated" to discover if there was anything remarkable in it, but the operator "found nothing but a scarce perceptible calx remaining."‡

A girl lost her way on a barren moor in the island of Lewis, where she remained eighteen days without food. Mr. Miller, who saw her two hours after, says she was much emaciated.§ The Records of the Tower|| mention a man, a Scot, who was imprisoned for felony, and closely watched for six weeks, during which time he did not take the least nourishment, and on this account obtained his pardon. A similar case of a felon lately occurred at Smyrna. He was condemned to be starved to death for some crime, but being found alive twenty-eight days after, having, during that period, had neither food nor drink, but subsisting on a small box of wafers which he had contrived to secrete

* Was this owing to the presence of sulphuretted or carburetted hydrogen, or both?

† The editor of "The London Medical and Surgical Journal," in his fourth vol., p. 87, says, that in "The London Magazine" for August, 1769, there is an account of a young woman, 24 years of age, who had fasted two years, and whose secretions were also suppressed. We searched the volume of the London Magazine alluded to, and, as we think, carefully, but were not able to find this case. It is probable that the case is barely chronicled in the "occurrences," and as these are in small type, the paragraph may have escaped our notice, or what is very likely, the volume quoted is an error of the press. Haller mentions an extraordinary case in his *Elementa Physiologiae*, tom. 6, sec. 2, 11, 6. See Conf. *Memoires de l'Academie de Sciences de Toulouse*, t. 1, 1783. *Priester's Lib. devoted to Surgery*, vol. 12, p. 184. *Van Swieten Comment. in Boerhaav. aph. t. 3*, p. 508. *Hist. de l'Academie Roy. de Sciences*, 1769. *Hufeland's Art of Prolonging Life*, 1st ed., p. 67. *Halspart van der Weil Observat. Rar. Centau. Poster.*

‡ Phil Trans., vol. 14.

§ Med. Comment., Dec., vol. iv. p. 360

|| Rees and Burrowes both quote this case. We suspect it to be the same as that we shall adduce presently, viz., that of John Scott. We have not had time to consult the Records of the Tower, and are consequently indebted to Rees and Burrowes for our information.

about his person, he was pardoned. We are told of some women who lived thirty-four days in a small room covered with snow, on the smallest possible quantity of food. During this period, which seems remarkable, if not incredible, they scarcely slept.* A French infantry officer, retired from service, became deranged and refused food. He continued his fast from December 25th, to February 9th, during which period he drank only about a pint and a half of water per diem, flavoured with a few drops of aniseed liqueur. This, until the 39th day, he took regularly, after which he refused all drink to the 47th. It is remarkable, also, that he did not take to bed till the 30th day, when he felt weak. His return to food was followed by partial recovery.† In the 31st year of Edward III., 1356-7, Cicely de Rigeway, condemned to death for killing her husband, was pardoned because she had fasted forty days, "in *areta prisona*, without food or drink."‡ John Scot, a Scotchman, took sanctuary from his creditors in Holyrood House, when he fasted from thirty to forty days. The king having heard of this man, shut him up in a room in the castle to which no one had access. Bread and water was set before him, but after a trial of thirty-two days he was found not to have touched it. He was then liberated, and going to Rome gave a similar proof of his powers of abstinence to Clement VII. He repeated his fast at Venice and in London, where, reflecting on Henry VIII. for divorcing Catharine, he was thrown into prison, (the Tower?) where he fasted fifty days.§ Mary Vaughton, of Wigginton, from her cradle eat little. Her daily food was a piece of bread about the size of half-a-crown, or if she eat of meat, the quantity of a pigeon's leg at most. She drank neither spirituous nor fermented liquors, but only water or milk, or milk and water; nor did she take of either of these liquids scarcely a spoonful a day, yet her complexion "was fresh and healthy enough.||

PHARMACEUTICAL NOTICES.

Preparations of Iron, by W. Tyson, Esq.—With respect to preparations of iron, I have to observe, that the filings are often productive of inconvenience and a disturbance in the stomach, with foetid eructations, from the evolution of hydrogen gas. These effects are produced in a still greater degree, by the use of even a few grains of the sulphuret of iron; sulphuretted hydrogen being given off, which acts as a poison, and consequently this preparation is not well calculated for internal purposes.—The *rubigo ferri* requires to be given in large doses, on account of its insolubility, and to be long persisted in; in both cases the stomach often becomes cloyed, and sickness arises before sufficient can be taken to produce the desired effect.—The *subcarbonate* or *precipitated carbonate* of the shops, is liable to the same objection, being, as I apprehend, peroxide, or mere colcothar, and but in a slight degree soluble, which is the reason why such large quantities can be occasionally taken for a dose, whereas of the carbonate of the protoxide as formed in the mist. ferri e., or in the pil. ferri e., two very useful preparations, from five to ten grains is generally as much as can be taken for a dose, without producing considerable stimulant effects.—The *sulphus ferri* occasionally produces pain in the bowels, nausea, and vomiting, especially if taken in improper doses, or long continued.

The most valuable preparations of iron are those

* *Somis Ragionamento sopra un fatto avvenuto in Bergamoletto*, &c., p. 74.

† *Hist. de l'Academie des Sciences* 1769, p. 45. See Willan's case of Monomania, where the patient fasted 61 days. *Miscel. Works by Dr. Ashby Smith*, p. 437. Dr. Currie's case, *Med. Reports*, vol. i., p. 304, of fourteen men and women wrecked on the coast of Arracan, who lived twenty-three complete days without a morsel of food, and it was not till the 25th day that two of their companions died of want.—*Brewster*.

‡ Platt's *Hist. of Staffordshire*, p. 287.

§ *Ideam*. 286. This is the case alluded to in note 24. || *Ideam*.

which have the dentoxide for their base, as in the mineral waters, and in the formula I am about to give you:

LIQUOR OXYSULPHATIS FERRI.

R. Ferri sulphat. 3ij. (or 3iij.)

Acidi Nitrici, 3iij.

Aquæ Dist. 3iss.

Tere diligenter per horæ quadrantem acidum nitricum ferro vitriolato, dein sensim addendo aquam, per chartam cola, et fiant guttæ, 6 quibus capiat æger gtt. v—xij bis in dies ex infuso quassia vel aqua.

This form, I believe, was invented by Sylvester, about forty years ago, and has ever since that time been in constant use among the practitioners of Derbyshire. I wonder it has not been inserted into the Pharmacopœia, as it is by far the best and most powerful of all the preparations of iron. The oxygen of the nitric acid uniting with the sulphate of iron, forms a persulphate; at the same time the iron is converted into red oxide. As a medicine it far surpasses the tinc. ferri mar., and it never precipitates the oxide of iron. It is one of the most valuable restoratives in the debility and torpor of the liver, which remains after the successful treatment of hepatitis. Patients do not well bear above ten or twelve drops to a dose; and when given with small doses of sulphus magnesiae, &c., it equals the purgative mineral waters. I think it will be found to be an antidote to prussic acid, as it instantly combines with it.

This form having the red oxide for its base, enables me to obtain some of the mildest, most efficacious, and beautiful of the preparations of iron.

FERRI BITARTRAS.

R. Ferri Sulphatis, 3iij.

Acidi Nitrici, 3iss.

Tere simul guttatim:—cessatâ effervescentiâ adde Aquæ font. 3vj.

Potassæ Supertart. 3vj.

Coque, et liquorem tepidum per chartam cola; fiat sal siccus, s. a. Dose, gr. v.—xx.

The sulphate of potass here produced, adds greatly to the efficacy of the medicine, rendering it gently aperient.

POTASSIO-TARTRAS FERRI.

R. Ferri Sulphatis, 3vj.

Acidi Nitrici, 3iij.

Tere simul guttatim per horæ quadrantem, et adde Aquæ Font. 3vj.

Misce et per chartam cola, cui adde Potassæ carbonat. 3vj.—et sepe per aliquot horas; liquorem supernatantem effunde ex oxido precipitato, adde

Bitartratis Potassæ, 3iss.

Aquæ font. 3viij. vel. q. s.

Decoque et per chartam cola:—leni calore consumatur liquor ad pulverem siccum. Dose the same.

These two preparations dissolved in boiling water, continue in solution when cold.

AMMONIO-TARTRAS FERRI.

R. Acidi tartarici, 3ij.

Ammoniae carb. 3j.

Aquæ font. 3vj. vel. q. s. Miscæ fiat solutio.

R. Liq. ferri oxysulph. 3j.

Liq. potassæ, q. s. M.

Wash the precipitate with distilled water upon a filter, add the oxide, while in the state of hydrate, to the above solution, and with a gentle heat dissolve the iron, and evaporate to dryness. Vel,

R. Liq. oxysulphat. ferri, 3j.

Potassæ subcarb. 3iij.

Aqua font. 3vj. M.

The precipitated oxide to be treated as above. Dose, gr. v—x.

Perfectly soluble in water. Contains about one grain in four of dentoxide of iron.—Here we have three preparations of tartrate of iron, which when mixed with a due proportion of water, are remarkable for their solubility, and the beautiful golden colour of the solution; hence form elegant mixtures for medicinal purposes.

LIQUOR FERRI BINIODIDI.

R. Potassæ hydriodid. 3ss.

Aquæ puræ, 3x. Miscæ, et adde

Liq. ferri oxysulph. 3ij. M.

Dose, gr. xx—xxx. bis die.

This solution is of a beautifully deep red colour, and transparent. It contains, like most other iodides, a little free iodine; but retains its colour, and does not part with its iron; for I have some now by me which was made six years ago, and the only deposit is a little sulphate of potash. The liquor oxysulphatis ferri is also a test for the purity of hydriodate of potash, producing in the above proportions, a deep transparent solution.

LIQUOR FERRI DEUTOXIDI.

R. Potassæ carbonat. ʒij.
Aceti. dist. ʒiv. Misce, et adde
Liq. ferri oxysulph. ʒj. M.
Capiat gtt. xxx—xl. bis terve die.

By long keeping deposits peroxide.

This last form I have introduced here, chiefly as a valuable hint to the dyers; it is a speedy way of making acetate of iron, and contains the base of their most valuable colours, viz., the prussiates, gallates, &c.—In medicine, as well as in the arts, much disappointment would be avoided, and much advantage gained in attending to the base, that is to say, to the state of oxidation of the mineral made use of; each oxide possessing essential properties, differing materially from each other. This we have already seen in the observations upon antimony and mercury; but it is more particularly evinced in the use of copper. In copper we have a valuable tonic and astringent in some cases of epilepsy, eliorca, and uterine hæmorrhage; but nearly all the preparations now in use are unmanageable, as they contain peroxide, which is poisonous, while the protoxide is nearly inert. Even the ammoniacet, which is the mildest of them all, still requires the greatest care, as it also contains peroxide.—The celebrated Boerhaave was in possession of a preparation of copper, with which he was very successful in the treatment of many diseases; and Cullen laments his having left behind him no form for the preparation. But in looking over his Praxis Medica, I suspect it was the muriate he made use of, which he says, is the least disposed of any to excite vomiting, but of which I have no experience.

Oil of Asafœtida. By Dr. John Stenhouse.—It is to this oil that asafœtida owes its highly offensive smell. The quantity of oil which the resin yields, varies according to its freshness. A pound of the resin generally yields about one-third of an ounce of oil, which is obtained by distillation with water in the usual way. It is advisable to mix the resin with pounded glass, as this prevents the resin from adhering to the bottom of the retort, and both hinders it from burning and diminishes the violence of the succussions with which the distillation would otherwise be attended. The oil has usually a slight yellowish tint; its specific gravity is 0.9428 at 60 deg. Fah., its taste is first mild and then acrid. When exposed for some time to the air it oxidizes, and a resinous matter forms in it. In order to prepare it for analysis, the oil which had been twice distilled with water to remove all the resin, was rectified over chloride of calcium on the oil-bath. Its boiling point is by no means constant, it began to boil at 325 deg. Fah., and continued to rise until it reached 370 deg. Fah. The receiver was changed three times during the distillation, and the products separately collected and analysed. The presence of sulphur in oil of asafœtida was first noticed by Zeise. It differs from oil of mustard, by containing no nitrogen. The carbon and hydrogen were estimated by analysis with oxide of copper, and the sulphur was determined by passing the oil in vapour over a mixture of nitre and carbonate of baryta at a red heat. The following are the results of the analysis of the oils collected at the three different stages of the distillation, as already specified:—

	1st Oil	2d Oil	3d Oil
Carbon . . .	66.16	62.54	58.42
Hydrogen . . .	9.83	9.45	9.12
Sulphur . . .	22.93	20.12	16.88
Oxygen . . .	1.08	7.89	15.58
	100.00	100.00	100.00

It is evident from these results, that oil of asafœtida is a mixture of various oils, one or more of which consist probably only of carbon, hydrogen, and sulphur, with other oils containing more or

less oxygen. The less oxygenated portion is the most volatile. It is therefore unnecessary to attempt to deduce any formula from these analyses. The action of re-agents on oil of asafœtida was as follows:—salts of silver, lead, and protoxide of mercury, gave black precipitates. When brought in contact with peroxide of mercury, heat was evolved, and a part of the oxide was converted into a greenish yellow mass, which was insoluble in water; a very small portion of the oil was acted on however. Corrosive sublimate immediately produced a copious flocculent white precipitate. It was insoluble in water, alcohol, and ether. It was soluble in nitric acid, and when boiled with solution of potash, the mercury was precipitated in the state of protoxide. Oil of asafœtida does not combine with ammonia. It is very little acted on either by aqueous or alcoholic solutions of potash. Nitric acid acts on this oil with great energy, and the evolution of deutoxide of azote. It is converted into a resin, and on adding a salt of baryta, an abundant precipitate of sulphate of baryta is obtained. Sulphuric acid first reddens, and with the assistance of heat, chars it. It dissolves iodine readily, but without explosion.—*Memoirs of the Chemical Society.*

Chemical Matches.—Put forty grains of phosphorus into a wide-mouthed bottle, add enough oil of turpentine to cover the phosphorus, then mix in ten grains of flowers of sulphur, put the bottle into hot water until the phosphorus is entirely dissolved; stop the mouth of the bottle with a cork, and well shake the whole until it has become cold; afterwards, pour off the supernatant oil of turpentine. Into the mixture of phosphorus which remains in the bottle, dip the extremities of the matches, and, after some time, when they have become a little dried, dip them again into the following mixture:—Dissolve thirty grains of gum arabic in a small quantity of water; add to it twenty grains of chlorate of potash, and mix them intimately together; then again add ten grains of soot previously mixed with a few drops of spirits of wine. In about twelve hours the matches will be perfectly dry, when they will ignite on rubbing them over a rough surface.—*Soubeiran's Pharmaceutical Notes.*

Purification of Cream of Tartar.—To purify cream of tartar from lime and copper, M. Duflos puts twenty-four pounds of the white crystals of tartar into a perforated porcelain capsule; this capsule is suspended in a vessel which is afterwards filled with a mixture of two pounds of muriatic acid and twelve pounds of water, and the whole arranged so that the crystals of tartar are just covered with the diluted muriatic acid. These are left in contact at a gentle heat for twenty-four hours: the crystals are then taken out, drained, washed, and dried. I have repeated this process, which answers very well.—*Soubeiran's Pharmaceutical Notes. Pharma. Trans.*

EXTRACTS FROM FOREIGN JOURNALS.

[For the Medical Times.]

GERMAN.

Suicide with anomaly of the genital organs. By Dr. Reiffsteck.—The following is one of several cases which have been observed of this nature.

CASE.—N. N., twenty-six years of age, a weaver, unmarried, was found dead in his house on the 21st of February, 1841. His body was lying against a sack; one hand held a razor, and there was a wound in the neck four inches long, completely dividing the larynx, and even injuring the vertebral column. No other traces of injury upon the body. On the autopsy, we discovered the cerebellum to be rather softer than natural; nothing peculiar in the chest or pelvis. On examining the genital organs, we found but one testicle descended in the scrotum; the right one firmly retained within the abdomen, was rather smaller than the left; upon this latter, at the point where it was continuous with the epididymis, was a small hydatid of the size of a pea,

attached to a pedicle about three lines in length; it was transparent, and contained a fluid as limpid as water.

Spontaneous rupture of the uterus. By Dr. Faber.—CASE.—A woman, thirty-six years of age, had had several favourable confinements; being again enceinte, she had during her pregnancy an attack of gastric fever, of which she was perfectly cured. One night, M. Faber was called to her by the midwife; he found her with a pale face, hurried respiration, cold extremities, feeble pulse, and scarcely sensible. On a vaginal examination, he discovered the head behind the os uteri, which was relaxed and widely dilated; there were neither uterine contractions nor hæmorrhage. She sunk a few minutes after his visit. The Cæsarean operation was performed with a hope of saving the infant. On incising the peritoneum, a large quantity of blood escaped, which appeared to fill the whole cavity of the pelvis, the uterus being exsanguinous, and the child dead. The placenta adhered to the upper and left part of the uterus, at the point of the incision; an oblique rupture of about four fingers' breadth extended along the right side and posterior part of the organ, beneath the Fallopian tube. The uterus was of a greenish blue colour on this side, and at the ruptured part was rendered as thin as a piece of parchment. All the abdominal organs were in a natural state.

The above is one of those cases of rupture of the uterus which would doubtless have been laid to the *maladresse* of the accoucheur, had any attempt at delivery been made.

Report of the Hospital for the Insane at Prague, from 1835 to 1840. By Dr. Riedel.—The number of insane patients received into the hospital had increased to 751, of whom 330 appeared curable, and 421 incurable. Of the 751 patients, 261 were perfectly cured; in 95, there was an amelioration; 182 died, and 231 remained in the hospital. Of the total number, 425 were males, and 326 females; 335 married, and 416 unmarried. According to M. Riedel the greater proportion of males, compared to females, affected with mental alienation in Bohemia, is attributable to the mode of life adopted by the women of the country, who occupy themselves less with politics, with literary and social affairs, &c., and are not so addicted to that refined luxury which corrupts the morals of Paris, Lyons, &c.; still, during the last six years, the spirit of the age has made more or less progress in Bohemia, and hence we remark that the relative number of males, compared to that of females, affected with this disorder daily becomes less.

From 1 to 10 years of age	-	6
11 to 20 "	-	75
21 to 30 "	-	230
31 to 40 "	-	193
41 to 50 "	-	141
51 to 60 "	-	73
61 to 70 "	-	25
71 to 80 "	-	5

Total 751

Hæmoptysis; copious menstruation, coinciding with hæmorrhage from the index-finger of the right hand; hæmorrhoidal state of the uterus. By Professor Quadrat.—CASE 1.—A woman, 34 years of age, and childless, had been affected for four years with menorrhagia, depending on abdominal plethora, characterised principally by a turgescence of the veins of the rectum and neck of the uterus. The mother of the patient, and two of her sisters, suffered under a similar complaint. At the age of 16, she menstruated copiously; and if affected with the slightest wound, she lost a large quantity of blood. At 19 years of age a very extraordinary phenomenon appeared, which lasted six

years; on the eve of each menstruation, the last phalanx of the index-finger of the right hand swelled slightly and showed a rose-coloured spot, rather sensible to the touch; after a few hours, acute pain was felt, which diminished on the sudden appearance of a jet of blood, of a vivid red colour. The hæmorrhage usually lasted for a quarter or half an hour, and continued for three or four days, the ordinary duration of the menstruation, being frequently interrupted by intervals of an hour at a time. It could not be completely arrested by compresses or cold. The thin jet, which threw itself out for a distance of 2 to 4 inches, became still stronger on plunging the finger into warm water. During the hæmorrhage from the finger, the menstrual flux usually escaped by drops only, and increased when the other ceased. The skin of the finger became soft, and as it were spongy, but did not undergo any other alteration. Since the last appearance of this extraordinary phenomenon, when the flow of blood lasted two hours without interruption, and to such an extent that the woman almost fainted, there had occurred frequent, but not periodical, attacks of epistaxis as well as an hæmorrhoidal state of the veins of the uterus. The phalanx of the right index-finger is tumefied, but not painful.

CASE 2.—This second case was that of a woman, 23 years of age, who, during two confinements, had laboured under such copious attacks of epistaxis, that it had each time been necessary to have recourse to the plug. Her mother, as well as her sisters, were also subject to epistaxis, spitting of blood, and copious hæmorrhage; but what was most remarkable, was that the second child of this woman died the third day after its birth of hæmorrhage from the umbilicus and gums, preceded by inflammation of the umbilical vessels, the bladder, the scrotum, and the left testicle, with ecchymosis of the left fore-arm.

Large Fistula in the Neck. By Professor Albers.—**CASE.**—The individual labouring under this fistula, 41 years of age, has been a long while in the army, and received a sabre-cut in the region of the neck, over the hyoid bone, when at the taking of Constantine. After this wound, there was left a fistula an inch in diameter one way, and two inches the other. The epiglottis, and the two pillars of the *velum palati*, are distinguishable through the opening. This man can merely give utterance to the labial sounds when the fistula is open; on the contrary, he speaks very distinctly when it is closed; he is obliged to cover it over to swallow his food, but the deglutition of the saliva is easy, and a slight motion can then be perceived in the epiglottis. Respiration takes place by the fistula when open, and then no air passes by the nose or mouth. He is in good health and condition; the fistula is kept covered with a piece of leather, lined with linen; and since the reception of this wound, he has gone through two years of service.

On an epidemic of Trismus Nascentium, observed in the hospital of Stockholm, in 1834. By Professor Cederschiöld.—Cases of the above disease have been often observed in the hospital of Stockholm, but, in 1834, this malady became so frequent as to constitute a true epidemic; in a few months 42 children were attacked, and 34 died. M. Cederschiöld attributed the cause of this epidemic to a sudden change of the atmosphere, which, hot in the month of May, became suddenly frosty during the first days of June. A remarkable circumstance was, that the trismus did not appear among the new-born children in some particular houses, although the number of other diseases was very considerable, a fact which would not explain sufficiently the influ-

ence of atmospheric variations upon the hospital alone. The disease usually declared itself between the fourth and sixth day after birth, and rarely lasted more than two days; it generally ran the following course: the infant became convulsed with crying, especially when applied to the breast, which it seized with avidity, without sucking; shortly it contracted its mouth in a spasmodic manner; some hours after, symptoms of trismus or eclampsy supervened, rarely those of tetanus. Most frequently the disease commenced by trismus, and passed to eclampsy, and when tetanus was observed, it was usually towards the termination. In trismus the spasms were continued, but intermittent in eclampsy and tetanus. The attack in eclampsy was presented under three forms—first, by a sensation of choking; next, by muscular contractions; and lastly, by a deep kind of râle. In the first period, the respiration appeared laborious, in consequence of spasm of the larynx; the whole body was stiff, the face puffed up and livid, the eyes red and prominent, and the pupils dilated; with the return of respiration the second period commenced. Upon the body, hitherto contracted, some convulsive movements were observed, more in the superior extremities than the inferior, and especially about the face and eyes. The bloated and coloured state of the face disappeared, as well as the convulsive movements, and lastly the third period was established; it was characterized by difficult respiration, accompanied by a râle arising from the froth which filled up the mouth. In the tetanic form, the intervals between the paroxysms were longer, and the disease appeared less troublesome; the head was bent backwards, and the inferior limbs arched towards the back. During the paroxysm, especially in eclampsy, the movements of the heart were tumultuous, the whole body felt hard to the touch, and was covered with a clammy sweat, especially towards the upper part; frequently there was observed a miliary eruption about the neck, the chest, &c. On the autopsy, the vessels and sinuses of the brain, as well as the cerebral substance itself, and the spinal marrow, were found gorged with blood; there was a plastic exudation at the base of the skull, a little yellow serosity in the pericardium, the heart and large vessels being filled with blood; the lungs collapsed, contained but little air and blood; the gall-bladder ordinarily distended, and the bile often of a red colour. The treatment consisted in the application of leeches to the nape of the neck, in the administration of emetics, purgatives, calomel, anti-spasmodics, as the warm-bath, oxide of zinc, musk, assafoetida, and opium, applied both internally and externally, and lastly, electricity. Of all the children, in whom the disease was thoroughly developed, not one escaped; those who have been set down as cured, had only the premonitory symptoms of the affection. As prophylactic means, the wards were warmed, the patients placed separate, the new-born children purged to get rid of the meconium as soon as possible, and lastly, baths and lotions of water containing chlorine were employed.

On simple and double Pneumo-Hydrothorax. By Dr. Puchelt, jun.—The following are the conclusions at which M. Puchelt arrives in a small memoir which he has published on the above disease, and which contains almost all that is known of this malady:—1st. The duration of double pneumo-thorax is much shorter than that of the simple form; in the first, it may be some days; in the second, several months, or even a year. 2nd. The commencement of pneumo-thorax is ordinarily characterized by sudden pain in the diseased side, and by great dyspnœa; still these two

symptoms may be wanting. 3rd. The pain in the side, which is developed in the course of the disease, may become very violent; this is a pleuritic pain. 4th. In double pneumo-thorax, the general state of the patient is less marked by symptoms of collapse, than in the simple form; but it is distinguished by the sensation of suffocation. 5th. Dyspnœa is inseparable from double pneumo-thorax; it is scarcely sensible in chronic cases of the simple disease. 6th. The diseased side being dilated in pneumo-thorax, the phthisical appearance is effaced, which renders the diagnosis very difficult in double pneumo-thorax. 7th. The organs surrounding the chest are displaced, especially the heart and liver. 8th. Percussion on the diseased side elicits a very clear and tympanitic sound; still it may be dull, or even natural in some parts. 9th. It is scarcely possible to indicate by percussion the level of the liquid. 10th. The causes of the sound being at times tympanitic or clear, depend, according to Skoda, on the more or less distended state of the parietes of the chest. 11th. It is not only the air and fluid found in the pleura which modify percussion, but also the adhesions of the pulmonary with the costal reflections of this membrane, as well as the formation of pseudo-membranous masses, &c. 12th. Metallic tinkling is not a pathognomonic symptom of pneumo-thorax; it is also found in large tuberculous cavities. 13th. The metallic tinkling is stronger in pneumo-thorax than where a cavity only exists. 14th. In pneumo-thorax this sign is most frequently found in the middle of the chest, towards the posterior wall, and over a great extent, whilst it is higher up, at the anterior part, and more confined in tuberculous excavations. 15th. There are two kinds of metallic tinkling; the one, having the character of bubbles, resembles the clear sound produced by the head of a pin lightly struck against a thin plate of metal; the other is a metallic echo of the voice, the cough and the râle. 16th. The metallic tinkling with bubbles is produced by the passage of the air through the pleural exudation (if the pulmonary fistula open below the level of the liquid), or through the liquid which is found in the perforated tuberculous cavity, (if the opening of the lung be above the level of the pleural exudation), and must be attributed to the collision of the fluid, momentarily separated by the passage of the air. 17th. The development of this phenomenon is only possible when a bronchus which is permeable opens into the cavern. 18th. The metallic echo is only the simple resonance of the voice and of the cough in the pleural sac filled with air, and a little liquid. 19th. When the pulmonary fistula opens above the level of the exudation, and the cavern with which it communicates is small and dry, metallic tinkling with bubbles is not formed; and on the other hand, if the bronchial fistula be far from the circumference of the lung, there will be no metallic echo. 20th. Chemical analysis of the air contained in the pleura, which communicates with the bronchi, gives very little or no oxygen, a little carbonic acid, and a large quantity of nitrogen.

MEETINGS FOR THE ENSUING WEEK.

- MON.** Botanic Gardens, Chelsea, 9 a.m.
— Medical Society of London, 8 p.m.
— Geographical Society, (Anniversary) 1 p.m.
TUES. Royal College of Surgeons, lecture, 4 p.m.
— Linnean Society, (Anniversary) 1 p.m.
— Royal Medical Chirurgical Society, half-past 8 p.m.
— Zoological Society, half-past 8 p.m.
WED. Royal Medico-Botanical Society, half-past 8 p.m.
— Microscopical Society, half-past 8 p.m.
THU. Royal College of Surgeons, lecture, 4 p.m.
— Royal Society, half-past 8 p.m.
FRID. Botanic Gardens, Chelsea, 9 a.m.
— Royal Institution, half-past 8 p.m.

TO CORRESPONDENTS.

Received—J. P., Chester; Milo, Edinburgh; An Owner of an Asylum; A General Practitioner; Enquirer; One deceived; Medicus, Exeter; Mr. L. H., Harwich; Dr. Sinclair; Zeno; A Medical Reformer; A Constant Reader, York; A Constant Reader, Glasgow; A Constant Reader, Alphington; A Constant Reader, Ramsgate. Our notices to other Correspondents are deferred to next week.

THE MEDICAL TIMES.

SATURDAY, MAY 21, 1842.

When things are at their worst, a remedy is near.
OLD SAW.

WHAT a wretched spectacle does this profession of ours present to the man who, free, for a moment, from the blinding prejudices of membership, and the dulled perceptions of habitude, can look down over it with the enlarged mind of a philosopher. Shapeless and void like chaos, but with light on its face to show its hideousness—a mighty maze without clue or plan—a society in utter anarchy, where no order but everlasting warfare dwells—it realizes, in absolute fact, all that human imagination has conceived of lawlessness and confusion, even in the realms of utmost fancy. The only practical image which describes it with even a remote resemblance, is one which supposes a nation of statesmen, compelled by their jealousies and divisions, to be gravely governed by a motley code of laws framed from the phrenzies of a few lunatics of a bygone age, and administered by the interestedness of a few knaves of *this*.

Prolonged protection from man's most dreaded foe, *death*—the great boon of his life, health—and what alone can give it zest, the free and complete use of himself; these blessings are all held by every member of society, more or less dependant on the skill, the competency of his doctor. Society cannot test his ability—his ignorance may kill its members and they not know the cause. Our own profession can alone essay his competency, and imprint the mark by which society may know it. Yet how act we? We stamp the marks but in part, and when we do, so stamp them that they but deceive. Affecting to *test*, we take the people from their guard, yet remove no cause for distrust. We act like men who label drugs, but give the names at hazard; who inscribe the guide-post, but turn its fingers in wrong directions. Nineteen separate, independent, and mutually remote bodies of men, responsible to no body, influenced by want or abundance, whim or passion, folly or wisdom, and all the other varied circumstances in which chance, management, or any variety of fate may have thrown them, stamp the deceiving word doctor on whom they please, with as small qualifications as they please, and at as high or low a money price as they please!

We have also varieties of titles ex-

pressive of varieties of qualifications; and the same title—identical in language, and conveying identity of meaning to the people—is attached to widely different things. The one word Doctor, Surgeon, or Apothecary, bears *nineteen* different meanings, according to the places in which it is impressed.

Again. Truth is one and indivisible—the great principles of medical science are fixed and certain—and as human minds are similarly constituted in reference to them, there is evidently but one best means for their inculcation. Common sense, to go no higher, suggests an uniform mode of study of an uniform subject; beauty, order, and infinite economy of time and labour are only a few of its advantages. We, however, have as many systems of education as there are licensing bodies—as many subdivisions of method as there are schools. So varied, in truth, so grotesque, so time-killing are the courses which our own whim or others will doom us as students to describe, that if the experience of all bygone ages has left a single light by which to regulate medical education, our rulers must never have heard of it, or else have conspired to make no use of it.

A profession which forms so important a portion of the country, and on which the most valued interests of *all* its citizens so vitally depend, should, one would think, be carefully fostered, and certainly, most wisely governed. And what is our government? As medical men the law scarcely take cognizance of us. It looks not after our education, appoints not, tests not, our teachers, cares not for our qualifications, protects not the property which in our time, money, and labour we have invested in our profession; it neither knows us as students nor cares for us as practitioners. Whatever government we receive, we get from the rotten remains of antiquated institutions, the patched-up trades-unions of the worshipful barbers and grocers of a demi-civilized age. Will we, nill we, the rulers of these govern us. They appoint one another, fix their own stipends, mutually appoint each other to dignities, and are accountable for none of their acts to any body but themselves. They separately fix certain fees—we are obliged to pay them; they enjoin us to attend the lectures, and pay the fees of certain among them—we dare not refuse; they allocate a certain mode of study, whatever our conviction of *its* uselessness, or our natural suspicion of *their* interestedness, we must obey; and when, after all this humiliating, because irrational, servitude, and all this expenditure of money, we have become members of their institutions, we depend utterly on them whether by their lax after-admissions they will make that membership valueless or not.

But to understand perfectly the worth of their government, we must look at the pro-

fession as it aggregately shows itself after being so many years moulded to their wishes, and *solaced* by their care. In England we have three divisions with distinctions, which, if good, should be kept, (which they are not,) if *bad*, removed. While the lines that separate them are getting daily more indistinct, the hatreds and jealousies that oppose them are getting hourly more bitter. The London Physicians are being daily swamped by the physicians poured out upon them from the north and west; some of them are glad to avail themselves of accouchements, others league with druggists to derive a paltry profit from a gratis prescription, and many give several visits for one fee. With a mode of practice, and pretensions which do not suit the public, as is proved by their frequent enforced abandonment of them, they are all at internal war, a war at once personal and political, private and professional. The fellows war with the licentiates—the licentiates with the fellows—and the members of each subdivision with themselves. The pure surgeons are much in the same position, but in still less honourable colours. With a few high exceptions they are mainly dependent on the pickings which the General Practitioners afford them through the College, or those which they can extract from hospital or lectureship-jobbing. The General Practitioners while rising in qualifications are descending in station, pressed down by men with high-sounding titles, and often a lower education, and by the immense influx of rivals who so serviceably swell the College finances. The variety of their qualifications, the intensity of competition arising from their ludicrous superabundance, and other causes, combine to make them disunited, at variance with each other, and almost incapable of what alone offers them a chance of better state of things—a general union which, watching over their interests, might protect them from bad practices within, and bold aggression from without. Many, therefore, are taking refuge in druggists' shops, others fly to newspaper advertising and direct quackery, while others are tempted into even lower practices, which cast disgrace on the whole body. The whole profession, in truth, educationally, governmentally, morally, and socially, is diseased from head to foot, and there is no sound part in it.

On the principle that maladies are nearly cured when well known, we would risk even the imputation of tediousness in our anxiety to keep this hideous state of the profession perpetually before the public. Chaos and the beautiful universe, as it sprung fresh from the hand of its pleased Maker, were never more opposed to each other than the present medical anarchy, and that enlightened commonwealth which common sense and the enlightenment of the age demand that the medical men of this kingdom should form; and if the government continue to authorize the hideous anomaly—if our brethren continue to sup-

port it by their apathy and mutual jealousies—if society, unwarned by experience, still lend it tolerance, we at least have freed our consciences from all share in their *fault*. We have discharged our duty, and if we shall fail to rouse to opposition, we shall at least have saved the dignity of human reason, and the character of our age for enlightened civilization, by registering one strong, and earnest, and reiterated protest against the iniquitous system under which medical science, medical men, and our countrymen generally, are at this moment condemned to suffer.

(From a Correspondent.)

Of all the locomotive improvements for which the present age in England outshines every one which has preceded it, there is none capable of contributing so much to the *immediate comfort* of the middling and labouring classes of the people, as that which we now submit to public notice, and which promises to supersede those pedestrian processions of woe and misery designated "*Walking Funerals*." These sad exhibitions, whilst they harrow up the feelings of the street-passenger by their poverty-stricken attempts to pay the last meed of respect to the dead, at a most oppressive expence to the surviving relative, remind him that the coffin which is borne upon the shoulders of the undertaker's men, contains one more contribution of putrefactive mortality, to be added to the heaps of rotten human flesh, already exhaling their poisonous effluvia, and contributing to destroy health and shorten life, in the various Golgothas with which this city has been most unaccountably crowded for several centuries. Thanks to the spirit of improvement in regard to our social comforts and welfare, which has been some time abroad, this most detestable and deleterious of all nuisances is about to be abated; for, although the magnates of the land, who occasionally reside in London, have generally, from the open and airy situations in which they sojourn, escaped contagion, and even inconvenience, from the putrid exhalations arising from the never ceasing decomposition of 50,000 human bodies per annum, their attention has been of late years aroused to a serious contemplation of the evil, as it affects the great body of the population; for, if from this church-yard *malaria*, the crowded portions of the metropolis should at any time become affected by pestilence, it is easy to perceive as all medical experience proves, that airy localities, cleanliness of person, warm clothing, rich and nutritious food, nay medicine itself, aided by all the odoriferous gums and perfumes of Arabia, will avail but little to the wealthy in warding off Typhus, Plague, or Cholera, when these scourges of the human race have once been engendered by miasma. This common sense view of the dangers we have been running, led some years ago to the opening of cemeteries in various suburban districts; but, alas! man is the slave of custom, and these tastefully laid out and garden-like burying-grounds have not attained that high degree of favour with the public, which their

manifest utility demands for them; consequently, sepulture in the crowded vaults and over-laden church-yards of London, seems to be diminished in a very small degree. Much of this pertinacious adherence to old and pernicious habits, however, would appear to arise from the comparatively *greater expence* of transporting the corpse of a relative to the airy vaults and grassy graves of Highgate, Nunhead, and Kensall Green, than that of depositing them among the masses of corruption already poisoning the air in Portugal-street, Mary-le-bone, and Bunhill-fields. Her Majesty's Government has taken the matter seriously up, as one vitally affecting the whole community; and, in doing so, we are well pleased to perceive that they have the powerful aid of the Church. An Act is about to be passed for preventing any more burials within a certain distance from the site of the Royal Exchange; Ministers will give it their aid; and the Clergy, headed by Dr. Bloomfield, Bishop of London, fully aware of the baneful effects of the present system, have given it their entire and cordial concurrence. The provision for an unlooked-for difficulty, however, which no Act of Parliament could ever overcome—viz., that of compelling *poor* as well as rich to defray the high charges necessary for the conveyance of corpses and their relatives to a distance of several miles from their habitations, has been reserved, not for legislators, but for one of those master-spirits, whose powers of calculation and indomitable energies enable them to accomplish objects far beyond the ken and grasp of common mortals. This individual has invented a *funeral carriage* of exceedingly handsome, and even magnificent appearance, which will enable *all* classes to inter their dead in the various cemeteries round London, at even a less expence than that attendant on a common "*walking funeral*!" This novel and most ingeniously constructed carriage, which combines the funeral *cortege* of a hearse and mourning coach in *one vehicle* on its progress to the cemetery, is capable of instant transformation into a *mourning coach only*, so soon as it has deposited its lifeless load; and that, merely by a *contraction of its length*, and the consequent formation of seats for the undertaker and his attendants to ride back! A more ingenious and efficient contrivance has certainly never been conceived or executed. The inconvenience and even expence of "*walking funerals*," which are often severely felt, particularly by female mourners, in wet and cold weather, will thus be henceforward and for ever obviated; inasmuch as the cost for a whole day, if that time be requisite, of a funeral carriage, with one horse and one driver, to carry a corpse and six mourners, will not exceed a *guinea*! and even one with two horses, and all the pompous paraphernalia which usually grace the last sad and mournful journey of the rich, in their progress to the tomb, cannot possibly cost more than *two guineas*! These, indeed, are changes in our social economy—changes which we are sure will be warmly appreciated by many a poor family, whose *all* is frequently deposited upon

the shelves of the pawnbroker, to pay due honour to a departed wife or husband,—to a beloved son or daughter,—to a revered father or mother. Alas! little does the world know the privations and sufferings which many a bereaved family endures during weeks and months after the interment of a near and dear relative, in order that they may accomplish the darling and cherished object of burying the dead with due honour and respect. We consider that very great praise is due to the gentleman to whom we have alluded as the inventor of this new system of metropolitan interment; as well as to the ingenious mechanic who has so well carried out the arrangements for the practical, easy, and inexpensive accomplishment of so bold, so extensive, and so generally useful an undertaking. In more prosperous times they would both have been considered worthy of a high parliamentary reward.

ST. THOMAS'S SCHOOL.

THE lecturers at this school have resigned *en masse*. The main reason was the paucity of students, and consequent dissatisfaction of the governors of the hospital. During the session which has just closed, not one of the lecturers have been paid even to the value of his lost shoe-leather. The botanical and chemical lecturers have even lost money. Various causes have concurred to this result. The youth, the namelessness, of some of the lecturers—a cause which is acting mischievously on the fortunes of the Westminster School, as well as on several others—the attraction of University College from the eminence of its salaried teachers—the Paris hospitals and new provincial schools—are among the reasons which explain this *first* break up. It is understood that the governors have resolved on a manly step—to attach respectable salaries to the lectureships, and to open them to the competition of the whole profession. We wish them much success. It will be a great step towards ridding us of the ruinous nobodies at present inflicted on students in nearly all of our schools. Other institutions must follow the example.

PENCILTINGS OF BYGONE MEDICAL MEN.

SIR CHARLES BELL.

As the great and pure Sir Harry Vane wrote, "King Death acts a mighty part in the commonwealth of this world." Rarely taken into account in the schemes with which we so lavishly fill the future—how vast appears his power as watching events unroll themselves, we mark how much he gives them of their line and shaping! As Cassandra—laughed at in her talk of the *future*—was owned a true prophetess, for all the time which had turned into *past*; so death, small as a dwarf in our speculations, is a gigantic figure in our histories. It is not in taking periodically all humanity to himself, that we so much do homage to his power—if he but touched each of us but once—though that once were mortally—his reign would not be so much to be regarded; it is his influence over the survivors, his power over the living, his potency as well in conservation as in destruction. How many a party close and compact has he scattered—how many a people oppressed and divided, has he bound together and strengthened! How

oft has he opened the way to wearied industry, placed food and fame in the path of famishing genius, removed obstructions opposing the struggles of merit? Yes, it is not life but death that rules the world. He keeps alight and brightly burning the lamp of civilization by surrounding it ever and anon with fresh relays of untired watchers; he it is who preserves heavenly science from the neglects of earthly dotage; he it is the friend of youth, the parent of improvement, the protector of society—and he alone—who gives us the means, if such means there be, and holds out the hope of reaching that increased perfectibility about which poets sing and metaphysicians reason.

We have thus, from less to more, fallen or risen (as the case may be) into vague reflections out of our usual wont from considering some of the changes which the sudden death of the distinguished subject of this memoir is like to produce. Great, we have thought, as is our loss in our bereavement of him, it is not, perhaps, *all* loss. The chasm vacant, younger, fresher Bells will arise to fill it. Silent and quiet as is the mind which once did so much for science—how much of life, we have thought, has that enforced quietude set in motion? Even our humble toils have not been left untouched by it. A month since, announcing these sketches of our bygone men, how little thought we that the first to call for our notice would be the healthy, the robust, the great Charles Bell! His death fell in the placid waters of life, and the undulations have reached even us!

Sir Charles was another of the distinguished men given to science by the modern Athens, where he was born in 1778 say some, in 1774* say others. As the latter is given since his death, we may, perhaps, accept it as the true date. A man of Sir Charles's age, latterly, would probably prefer to fix for his birth 1778 to four years earlier if he had the choice. His father was a poor clergyman of the Scottish Episcopalian Church, and with Charles had three other sons, all enjoying more or less celebrity. Two were at the Scotch bar, at which they have been looked on as scarcely less authorities than John and Charles in our own profession. The *poor* clergy have given medicine its most eminent ornaments; not to mention our Boerhaaves and a thousand others of bygone times; who can forget that we owe to them our Brodies, our Astley Coopers, our Rogers, our Copelands, our Halfords, our Lawrences, and our Bells.

Sir Charles was educated at the High School of Edinburgh, where he showed nothing of that extraordinary ability which the world has long justly attributed to him. His was not one of those small minds which reach their limited perfection in a brief season, which get a credit for cleverness because they make quick observations and tell them; Charles, like many of the Scotch whom we have known, observed but slowly, and, instead of talking, *thought* and *reasoned* on what he saw. Your slow boys have sometimes a mine of good matter in them—deep it may be and far removed from the surface—but still, with patient industry, some day within their call.

"Ingenium ingens
Inculato latet hoc subcorpore."

His brother John, as we have said, and as the world knows, was no ordinary man. Much older than Charles, he had attained high reputation as a surgeon before the future knight had even reached manhood, and was thus enabled to give the young Charles the advantage of good training in his initiatory studies.

The advantage, however, was mutual, for Charles was a drawer of no ordinary excellence, and assisted his brother very essentially by the use of his pencil. He illustrated one of the earlier works of John, who, speaking in reference to it in later life, dwelt with an honest pride on his brother's drawings, and said, that before his time "the bones were drawn like hedge-stakes, and the muscles like dish-cloths, while the nerves and blood-vessels were like the entangled threads of an unravelled skein."

He became a member of the Edinburgh College of Surgeons in the year 1799, and, by the influ-

ence of his brother, we presume, was at once made one of the surgeons of the only Edinburgh Hospital. According to Mr. Pettigrew he acquired great credit in this situation as an operator. In a case of lithotomy he substituted, for the first time, in practice, the knife for the gorget, and extracted the stone in two minutes and a half. Such an operation was at that time unparalleled, and won Mr. Bell very great reputation in the Scottish capital.

His self-estimation rising in proportion to the favourable opinion of his friends, Sir Charles, in 1806, resolved to try his fortune in the London capital. One of those bitter discussions which originate in the bad government, and are fostered by the bad passions of the profession, concurred, it is said, to recommend this course. His brother headed the movement party of the Edinburgh faculty, against the pretensions of the senior body, led by Dr. Gregory, who were waging a war of great asperity in favour of their exclusive pretensions. The contention became disgraced (as more latterly that between Messrs. Symes and Liston in the same locality) by personal altercations and vituperative attacks, which though relieved at times by much wit and humour, did anything but honour to the profession, and caused serious obstacles in the cultivation of that medical science which, as Sir Charles properly felt, can only be profitably studied in quiet, and remote from party turmoil.

Mr. Bell came professedly to London to follow the obstetric art, but we first hear of him as a lecturer. He had received no invitation, and was without influence. Clive, Cooper, Abernethy, and others scarcely less celebrated, were already in the field before him, yet he ventured his all on the chance of becoming a popular lecturer! This step indicates one feature in the character of Bell—self-confidence. Great as were his powers, he was conscious of their whole extent, and this consciousness showed itself in his general bearing. Success, in some measure, justified him in after life, but the trait, called by many vanity and conceit, detracted, particularly at the earlier part of his career, from the warmth of his admirers and the number of his friends.

He lectured in the school of Great Windmill Street, in conjunction with Mr. John Wilson, F.R.S., and subsequently with Mr. Shaw. His manner was good, and lent at once interest and clearness to his diction, which was elegant, and had an attraction peculiar to itself. It was in his lectures at this school that he first propounded those discoveries on the nervous system which have gained him such immortal honour. The anxiety with which his pupils awaited each successive lecture is said to have been intense.

Six years after his arrival in London he was elected surgeon to the Middlesex Hospital, after a contest in which twelve hundred governors voted. The clinical lectures he gave after his appointment were published in the Medical Gazette, and were deservedly much admired.

In the year 1809, Mr. C. Bell had the charge of a number of the wounded soldiers, who, after the battle of Corunna, and its consequent evacuation, were transported home. This opportunity of studying the subject of gunshot wounds was followed by another in 1815. On hearing of the battle of Waterloo he immediately hastened to Brussels, took charge of one of the hospitals, and personally attended, we are assured, no fewer than 800 men. His main object, however, in going over was to take drawings illustrative of a work he proposed to complete on gunshot wounds. Nothing in English water colouring surpasses the beauty of the admirable sketches which he took on this occasion.

In 1812, he condescended to become a Member of the London College of Surgeons. The examination consisted in a grave question as to the probable end of Buonaparte's career. His answer was considered so satisfactory that he was immediately declared admitted. The nonsense of this *expensive* farce—for Mr. Bell had to *pay* for his diploma—the fee being the only thing the worthy council could *not* pretermitt, shows in lively colours the necessity for a change in the regulations of our licensing bodies. If Mr. Bell's diploma from the Scottish College was no test of his competency as

a surgeon, common sense suggests that the college should be reformed; if it were a test its production should have been sufficient. When a public body is obliged to descend to farce to avoid more palpable absurdity, it is time that some alteration should be made.

The next step in the ladder of advancement which we have to record, was Mr. Bell's appointment as Lecturer on Anatomy to the College. His subject—"The Evidence of superior Design proved by Anatomical Researches"—the style—delivery—matter—manner—voice and person—gave an extraordinary degree of attraction to this course, and raised Bell's character as a physiologist and a deep thinker very high in the scientific world. One of the first evidences of this was his selection by the President of the Royal Society, the Archbishop of Canterbury, and the Bishop of London, to write one of the Bridgewater Treatises. The Earl of Bridgewater had left special directions that one of the dissertations which he had provided for by his remarkable will should be on the mechanism and vital endowments of the human hand. Bell was alike pleased with the subject and task, and produced his very able work, "The Hand," &c.

His treatise on "Animal Mechanics," published among the works of "the Society for the Diffusion of Useful Knowledge," was written in a kindred spirit, and consists of a very pleasing and able comparison of the mechanical principles which are in daily operation in the human body, with those which are less perfectly exhibited in our own handy-works. The basis of this work was supplied him by his course of lectures at the College of Surgeons, and it is said to have been undertaken at the special suggestion of Lord Brougham, who at this period was giving full play to the super-human activity of his wonderful mind, and working as though resolved that there should be no achievement in the world, political or philosophic, scientific or literary, which should not bear with it the stamp of his name, if not of his authorship. The treatise on "Animal Mechanics" was followed by the author's flattering conjunction with Lord Brougham in publishing an illustrated edition of Paley's Evidences of Natural Religion, one of the most remarkable gifts for which posterity will have to thank the present age.

At the accession of William IV. he was honoured, with John Herschell, David Brewster, John Leslie, and other of our literati, with the honour of knighthood, there being this special honour in the dignity conferred by his sovereign, that it was bestowed as a marked homage to him as among the most distinguished scientific men of his time. On the establishment of the London University, he gave up his school in Great Windmill Street, (which had become by purchase his private property,) and accepted the professorship of Physiology which was tendered to him by the governors of that institution. He, however, held the chair but a short period, owing to the contentions which arose in the early mismanagement of the University. He continued till 1836 his practice in London, (a practice which was more medical than surgical, and far from being as lucrative as his high standing would have led a stranger to suppose,) and in that year, receiving an unsolicited election to the Professorship of Surgery in the University of Edinburgh, he, to the surprise of most, accepted the invitation of his countrymen, and left London for the scene of his birth and early struggles,—

And as a hare when hounds and horns pursue,
Pants to the place from whence at first she flew,
He still had hopes, his long vexations past,
Here to return, and die at home at last.

There must have, no doubt, been much gratification in enjoying thus his hard-earned fare among the friends of his unnoticed boyhood, receiving the warm affection of his early friends, and extorting the admiration of his early rivals. This pleasure, apart from the satisfaction which he always felt in communicating his knowledge to the younger members of our body, was all the repayment that came to him for the abandonment of his expectations from a prolonged residence in the metropolis. His consulting practice in Edinburgh was insignificantly small. His book achievements were against him, and the Scotch are more distrustful of literary medical men than even ourselves. Poet-lawyers,

* A writer in the *Lancet* states 1781, but was clearly in error.

literary-physicians, and small incomes have some essential connexion. On leaving London, he was presented with a magnificent memorial of the respect in which he was held by the profession; and we would humbly suggest the propriety of selecting the present moment to make a united effort on the part of the profession of the three kingdoms, to erect an enduring and worthy monument to his glorious discoveries. We would not leave to future ages alone the honour of duly appreciating our great physiologist.

Sir Charles's death, as our readers know, was sudden, and offers a singular coincidence in one of its circumstances. Accompanied by Lady Bell, he was visiting Mrs. Holland at Hatton Park, proposing to make there a short stay on his way to Malvern. At Manchester, a few days before, he had suffered from temporary spasms of the stomach. These returned on the night of the 28th of April, and on the following morning, when Lady Bell, alarmed at the torpor into which he had unexpectedly sunk, sent for Dr. Carden, of Worcester, it was found that he had been dead for some time. He was buried on the 2nd of May, in the beautiful church-yard of the adjoining village, which—carrying out his early propensity—he had been sketching during the day preceding, and in which he had expressed a vague wish, while in apparent perfect health, that his remains might one day find their last long home.

The following is the catalogue of his works in addition to those already noticed:—"A System of Dissections explaining the Anatomy of the Human Body, the Manner of Displaying the Parts, and their Varieties in Disease," published in the years 1799 and 1801. "A System of Anatomy, by John and Charles Bell." The third and fourth volumes of this work, on the "Nervous System, the Viscera of the Abdomen," &c., were written by Sir Charles. "Engravings of the Arteries," illustrative of the above work, followed by "Engravings of the Brain," in 1802, and "Engravings of the Nerves," in 1803. "Essays on the Anatomy of Expression in Painting," published in 1806. "A System of Operative Surgery," published in 1807. "Letters concerning the Diseases of the Urethra," published in 1810. "Idea of a New Anatomy of the Brain," published in 1811, (a remarkable little work.) "Engravings from Specimens of Morbid Parts," &c., published in 1813. In 1816 he commenced a series of "Surgical Observations," a quarterly work, of which five parts only appeared. "Essay on the Forces which Circulate the Blood," &c., published in 1819. "A Treatise on the Diseases of the Urethra," &c., published in 1820. "Observations on Injuries of the Spine," published in 1824. "Institutes of Surgery," published in 1837. Besides these he has left us an immense multitude of able contributions read at the Royal Society, Medico-Chirurgical Society, or published through various periodicals.

We have no space to enter into the question of his discoveries on the nerves, or to canvass the rival claims which have been set up against him by Mayo and Majendie. It is sufficient to say that he was undoubtedly the first that opened this important field of investigation, and that on his success in exploring it rests mainly the reputation he now enjoys through Europe, and the estimation he is likely to receive from posterity.

In appearance, Sir Charles Bell was middle-sized, stout, and well made; his head was massive, with a Scotch style of shape; the nose large, the upper lip long, the cheek bones high. Dressed with considerable care, his hair snowy white, and carefully dressed, wearing gold spectacles, and showing a measured and somewhat solemn expression of countenance, there was much about him that reminded one of the grave and pompous physician of the last century. He was one of those sagacious men who allow not externals to detract from the reputation of mental power. If there was anything of genius in his writings which produced admiration, there was nothing in his mien or bearing to raise incredulity as to his being the author. Minds of equal calibre see through this empiricism of manner, and think they discover littleness beneath. They are probably mistaken. Men of their discernment are few, and their opinions make not the "bubble reputation." The many are the sovereigns of life, and they must be imposed

on with the heightening effect of a little dramatic colouring, or they become indifferent, or contempt. We must choose. Bell preferred, while still preserving his sincerity, to propitiate the latter, and the results are in favour of his wisdom. The career of Bell is a beautiful study. It presents us in the highest walks of life, what is daily seen in every other—Scotch thought and Scotch industry, wading to the uppermost place within the range of the party's calling or abilities. The Irishman patronized by George IV., who begged, through Dundas, as his sovereign's highest favour to be made a Scotchman, was as good a reasoner as satirist. Had Bell come to England as a gardener's workman, he would have ended as horticultural superintendent; had he come as a clerk, he would have finished as partner. Let us watch through his whole course, and we shall find no one instance of inadvertence or passion which hazarded his present standing, or chances of future ascent. Industrious, he prepared himself for every favourable casualty, and watchful turned it to account when it arrived. Where he could not create circumstances he shaped them—and where he could not shape them to him, he shaped himself to them.

SOME REMARKS ON MR. YEARSLEY'S LETTER TO THE PRESIDENT AND COUNCIL OF THE ROYAL COLLEGE OF SURGEONS.

To the Editor of the 'Medical Times.'

"Plures necat lingua quam Gladius."

As a happy illustration of my motto, I would instance the "Yearsley Circular," which has been appended to the *Lancet* and *Medical Times*, and copies of which have been distributed to all the "distinguished" members of the profession. I would never have seen this production, had it not been addressed to the president and council of the Royal College of Surgeons, but having read it, I may truly say, that Mr. Yearsley has utterly failed even in casting an imputation on Mr. Liston, while he has fully convicted himself of impudent assumption, and vulgar detraction. Mr. Yearsley, author of innumerable "Contributions to Aural Surgery," all remarkable for originality of conception? and purity of style? and moreover, given to science in that most fitting garb, viz., the "Sunday Press," being destined to descend to posterity with those benefactors to mankind, "Goss," "Morison," and "Solomons," addresses the council thus:—

"Most reluctantly do I come before you in the character of a complainant." *Excellent*; it is truly lamentable that a member of their council must be arraigned in another contribution to foolscap. He says, "Last March I invited, by circular, many of the leading members of the profession to be present at my operations for the cure of stammering, which I discovered by accident." I do not allow Mr. Yearsley any originality for this, as most educated medical men were aware, that in cases of defective speech arising from the mechanical obstruction of an enlarged uvula or tonsil, removal was of service.

He next "turned his attention to stammer," and then with consummate effrontery, he says, "I waived my personal interest," and consulted the feelings of the profession, by making my discovery public. Creditable indeed, in the year 1842, to publish his discovery! Then come the answers to the circulars; many could not come, but 500 doctors *did* come, and were absolutely thunderstruck, when they discovered that by removing the cause, you produced an effect.

O, rare discovery! Doctissimi Doctores! Then followed a pompous announcement in the next day's *Times*, of the doings in Sackville Street, and a great influx of patients resulted. The deaf and dumb had but to submit to the magician's snip, and to take up their hats and walk home cured.

But now for the grand charge.

"In the Literary Gazette of March 6," says he, "there is a pretended review of my work;" wherein the writer quoted a letter of Mr. Liston's to Mr. Hunt in favour of his process for curing nervous stammering, which cannot be too highly commended, for its extreme simplicity and correct

foundation. Our hero, discovering that "his occupation would be gone," that his indiscriminate attempts would not be allowed to proceed as before—that imposture would be dragged forth and unmasked—writes a most bombastic letter to Mr. Liston, and asks him if he is referred to in the certificate? Mr. Liston of course did not notice this insolent intrusion on his time, and having alluded to mutilations only, did not reply, seeing no one could call the *impotent* little snips of *Contributor* Yearsley mutilations. In fact, there is no ground for conceiving Mr. Liston *did* allude to him, as many horrid mutilations did take place from bungled attempts to imitate one of the latest of Diefenbach's operations; therefore this attempt of Yearsley's must be considered in no other light than a vulgar and dishonest attack on Mr. Liston; thereby hoping to gain additional publicity for ridiculous quackery. In fine, being treated by Mr. Liston in the manner adopted by the lion towards the monkey, he appeals to the College for an expression of sympathy, and having failed in procuring this to form the nucleus of another "*ad captandum*" contribution, he calls on all the gentlemen who were present at his exhibitions, and requests certificates to prove that he made no secret of his operation, and did not mutilate. Having seen nothing but the harmless snipping, and being invited by circular, the inference was obvious; but, let me ask Mr. Yearsley, whether he told those gentlemen that their testimonials were to form the attack on an honest man? Whatever he may answer, I tell him he did not, and that such disgust and indignation was manifested by several, that I observe the list of certificates much diminished in the *Medical Times* of last week. In what is past he has proved himself, 1st, either erring in common sense, or glaringly deficient in honesty in attacking Mr. Liston; 2nd, he has obtained certificates under false pretences.

But leaving these we come to something much worse, exhibiting in all its naked deformity the malignancy of the vulgar mind. He alludes to an unfortunate case of aneurism under Mr. Liston; a case which the enemies of that gentleman endeavoured to make use of without effect; a case which has been investigated by the highest medical tribunal of the land, and a verdict given alike gratifying to the friends of science and to Mr. Liston. Mr. Yearsley's expressions are so mendacious, so brutally coarse, and so perfectly unprofessional, that I should be very loth to quote them. Suffice it to say, that Mr. Yearsley has attacked an honest Scotchman, who has acquired an immortal reputation as the first operator of the age, who has shortened the period of suffering, and who will carry with him into the vale of years the respect and admiration of all his fellows, and who will hereafter live enshrined in the medical history of the world, as a man who has done much in his generation. The name of Yearsley and all his contributions shall have descended into the tomb of all the Capulets, alike forgotten and despised.

As a Scotchman and a lover of justice I have indicted these pages, and beg to conclude by assuring Mr. Yearsley, that fame is not to be obtained by mendacious detraction, or unfeeling abuse, and that Mr. Liston stands as far beyond him in the paths of honesty, as he does in the records of science.

"VERITAS."

NEWSPAPER PUFFS.

To the Editor of the 'Medical Times.'

SIR,—I beg to thank you for the kind manner in which you have mentioned my name, in relation to the paragraph which lately appeared in one of the Reading papers. As you may well suppose, I felt very much annoyed by its insertion, as I do not consider it respectable for hospital surgeons, or indeed any professional person, to be constantly before the public in the public prints. I can indeed assure you that I had not the slightest foreknowledge of the intention of the poor patient, Thresher, to express his gratitude in so public a manner, or I should have prevented his doing so, having a great objection generally to my name being made conspicuous in newspaper

paragraphs. The personal observations of Brutus, Jun., are too contemptible to require note or comment.—I have the honour to remain, your obedient humble servant,

F. A. BULLEY.

Surgeon to the Royal Berkshire Hospital.

Reading, May 16, 1842.

RECOLLECTIONS OF PARISIAN HOSPITALS.

Being Notices of Cases in the Practice of Dupuytren, Roux, Boyer, and Lisfranc.

By J. NOTTINGHAM, Esq., Surgeon, Liverpool.

Excision of the elbow-joint, by M. Roux. November 24th, 1832. Hospital of "La Charité."—A female, 30 years of age, was brought into the operating theatre this morning, to undergo excision of the elbow-joint.

The articulation was not much enlarged, and the patient's general health did not seem as yet to be seriously impaired. The incisions made by M. Roux were in the form of the letter H, two lateral extending above and below the bend of the joint, each about four inches in length, and joined by the transverse one which passed behind the olecranon.

Of the longitudinal incisions, the internal one was made first, the bistoury being passed down to the bone. Division of the ulnar nerve was avoided. The joint was exposed by dissecting up the flaps—one above, the other below the transverse incision; a spatula was passed closely in front of the humerus, and about two inches of its lower extremity removed by the saw.

The ulna and radius were next divided on the same level, at a point about two inches below the upper extremity of the olecranon. No blood-vessel of importance was divided.

The edges of the wound were united by sutures, *taking immense hold*, for M. Roux introduced each at about an inch on one side of the line of incision, bringing them out as far from it on the other.

Two pledgets of charpie spread with cerate were then applied, one on each side of the joint, and the limb in a semi-flexed position, reposed on a tin splint formed to receive it, a thin bag of chaff being previously placed upon it. The dressings were secured by the many-tailed bandage.

Aspect of parts removed.—Bones somewhat softened, and easily penetrated by the scalpel in stabbing through the cartilage.

The synovial membrane had lost its natural colour, being darker throughout than in the healthy state; it had, besides, a fungoid appearance.

There were small spots of ulceration in the cartilages, on the extremities of the radius and ulna; not so on the humerus.

November 28th.—Hitherto the case looked upon as one which goes on tolerably well, and M. Roux thinks that the prospect for the patient is good. Union partly by the first, and in some measure by the second intention is going on.

M. Roux took out the sutures this morning, and applied three transverse bands of adhesive plaister, one over the course of the transverse incision, to steady its edges, the others crossed the extremities of the longitudinal wounds.

There is not much febrile disturbance, but the patient's pulse is somewhat weak, and the tongue slightly furred.

December 8th.—The patient is much worse, and death appears to be fast approaching. Complains of pain in the chest, and difficulty breathing: has no appetite—took no food yesterday; surface of the body covered with a perspiration; pulse frequent and very small, tongue furred.

Looking at the parts concerned in the operation, the action going on has evidently been but languid, the granulations are soft and flabby.

Low diet is all along adhered to, and no wine or stimulants given.

The elbow is dressed this morning as before.

December 10th.—This morning, at 9 o'clock, the patient died.

The only remark I would make on this case will be to say, that, as in the last, by most English surgeons, a better diet, with a little wine, would have been allowed in the latter days of the after treatment.

MEETINGS OF SOCIETIES.

ROYAL INSTITUTION. — Mr. Griffiths delivered a lecture on the evolution and uses of phosphorus in the production of light. He commenced by giving an elementary description of the sources of phosphorus, the chemical composition of bone, and the mode in which this singular substance is obtained. He next adverted to its properties, and the production of phosphoric acid by its combustion, or by the action of nitric acid, and afterwards described the mode by which it is now procured, on the large scale necessary for the use of manufacturers. One hundred weight of finely powdered ox-bones, previously well calcined, and consequently consisting chiefly of phosphate of lime, is placed in a cask, and stirred with a wooden spatula into a paste with water, while another man pours on seventy-eight pounds of concentrated sulphuric acid in a thin stream. There must be a free escape for the gases and volatile matters, which are thrown off during this process. These materials are left to digest for twenty-four hours, and when decomposition is completed, then thinned with water, placed in a leaden pan over a fire, and stirred till grittiness ceases. The supernatant liquid, containing a super-phosphate of lime in solution, is drawn off into a copper boiler, and the precipitate repeatedly washed; these washings and liquids having been freed by deposition from the sulphate of lime, are filtered, and boiled to the consistence of thin treacle, when it will weigh about thirty-eight pounds. Ten or twelve pounds of powdered charcoal are next stirred in, and the whole mixture raised to a red heat, and the phosphorus is distilled over. It must be placed in retorts well-luted, and above two-thirds full. Sulphuretted and phosphoretted hydrogen gases first come over. The heat must be very carefully regulated. One hundred pounds of good bone earth will yield twenty pounds of phosphorus. When it is distilled over, it is dark and very impure; to procure it as it is met with in commerce, it is placed in chamois leather bags, immersed in water at 140 deg., when it liquifies, and is filtered through the leather by pressure, the extraneous matters being left behind. It is made into sticks, by drawing it up by suction, when melted, into a glass tube, and then plunging it in cold water, when the phosphorus sets, and is pushed out with a strong wire. The glass used must be warmed previously, or the phosphorus would form a hollow tube, causing a risk of danger to the workmen.

Phosphorus was discovered by Brent, a merchant of Hamburgh, in 1669, while performing a series of experiments, in searching for the means of transmuting the baser to the more precious metals. Its evolution was then purely accidental, and the exact process followed not known, so as to enable the discoverer to repeat it. Scheele afterwards, in 1775, ascertained, by chemical research, that it constituted one of the components of bone. It was then regarded as a philosophical toy, and was sold at £5 the ounce; it is now used extensively, and can be procured pure for 8s. 6d. a pound. It is

colourless and tasteless, flexible at common temperature, but fragile when exposed to cold; is heavier than water, of the specific gravity 1.088, and forms various compounds when exposed to the air, owing to the process of slow combustion, which is constantly going on: it is therefore requisite to preserve it in water. Æther equally prevents its combustion. The phosphoric acid, which is generated by its inflammation, and the phosphate of ammonia, render substances fire-proof. Phosphorus is very inflammable, and requires great care in handling.

To render phosphorus available for the production of fire, that is to say, to employ it in the manufacture of lucifers, it must be protected from contact with the air. Several plans have been adopted with this view. Slips of wood, tipped with sulphur, are dipped in melted phosphorus, and then moistened with gum-water. As the water evaporates, the gum dries on, and forms a sufficient protection. This is a useful process when the matches are employed at once, but if kept for awhile the sulphur combines with the phosphorus, and they are apt to act capriciously. Another plan is to take slips of wood tipped with sulphur, and dip them in the following mixture—equal parts of lamp-black and sulphuret of antimony mixed in a mortar, with three or four times the weight of chlorate of potash and water—when dried, they are tipped with a paste, prepared by mixing finely-divided phosphorus with gum-water. Phosphorus can be obtained in a minute state of division by agitation under water. The silent lights contain most phosphorus; those which crack, most chlorate of potash. Vermilion, sulphuret of antimony, and indigo, are used as colouring material. Lucifers are best kept in close tin-boxes.

ROYAL MEDICO-BOTANICAL SOCIETY. May 11, H. Gibbs, Esq., in the chair.—Dr. Sigmond resumed the consideration of the toxic effects of arsenic, with the view of introducing a test, brought forward by Captain Powell and Mr. Recce. It is constructed on the principle of the electrotype, a voltaic battery being used, and a piece of pure copper, properly connected by wires with the apparatus, being inserted into the suspected fluid. If only a minute portion of arsenic be present, it will be deposited in the form of black coating on the copper, and can be removed thence, and tested in proper tubes. The copper must be perfectly pure, and is best obtained for this purpose by the electrotype from its sulphate. Dr. Sigmond considers that there are several objections to Marsh's apparatus, which are not applicable to this. He afterwards proceeded to speak of the poisonous effects of the salts of mercury, and in the course of his lecture took occasion to notice the singular symptoms produced on those who are subjected for a long time to the influence of the vapour of mercury, as are the miners at Almaden, the thermometer manufacturers, looking-glass silverers, &c. Among these is the disorder described on the continent, under the title of *tremblement metallique*, which is but little known as yet in this country. It differs from paralysis agitans, and the muscular trembling in delirium tremens, inasmuch as certain muscles only, the flexors of the arms, are implicated. A great length of time elapses ere this complaint can be cured, and it most frequently happens that the relief is not permanent. Total abstinence from the exciting cause is imperatively necessary. The next lecture, on the 25th, will be delivered by Mr. Rodgers, the professor of chemistry, on the tests for arsenic and bichloride of mercury.

REVIEWS.

The Nervous System and its Functions. By Herbert Mayo, F.R.S., Senior Surgeon of the Middlesex Hospital, formerly one of the Professors of Anatomy and Surgery to the Royal College of Surgeons. London: John W. Parker.

THIS short treatise is chiefly remarkable for a close condensation of facts and doctrines appertaining to the structure and functions of the nervous system. The author does not aim at the unfolding or elucidation of new views, but simply at a systematic arrangement, and in as condensed a form as possible, of known facts. After a few introductory remarks on the relation of vitality to mind, the subject is discussed in four chapters. In the first, the laws of the nervous system relating to sensation and voluntary motion are referred to; in the second, a view is given of the functions of the cerebral organs; in the third, the influence of the nerves on the bodily functions is pointed out, and the last chapter is confined to the subject of perception. We cannot say that this will prove either the most useful or most popular of Mr. Mayo's works. To the young student it will, from its condensed and abstract character, be almost unintelligible; and there is little in it to attract the attention of the advanced student. Indeed, from the aphoristic and axiom-like form in which the subject is treated, a disjointed and repulsive aspect is imparted to a subject which otherwise from its intrinsic interest has much to recommend it. The book, however, is valuable, as a collection of the more important facts connected with the structure and functions of the nervous system; and the condensed form in which these facts are given, will not militate against it as a *book of reference*.

The "laws" of the nervous system relating to motion and sensation are laid down in the form of *propositions*, thirty-three in number, each proposition being usually accompanied with a few explanatory statements by way of proof or exemplification. These propositions may be said to comprehend a brief statement of the intimate structure and peculiarities of form of the nervous system of invertebrated and vertebrated animals, and the parts of the nervous system associated in the performance of the reflex function, and through which consciousness and volition respectively emanate. The following are the more important physiological facts or "laws," as Mr. Mayo designates them in this chapter:—

The spinal cord, with its nerves, is insufficient to maintain consciousness; there must be the addition of the medulla oblongata in a certain part, in which the dynamic centre of the nervous system resides.

Each lateral half of a vertebral animal is separately vitalized, or the preservation of consciousness in one half is independent of its preservation in the other.

The nerves in reference to the phenomena of consciousness, are of two kinds only, and are either exclusively sentient or exclusively voluntary.

The nerves are media of communication or transmission, and sensation is felt, and the voluntary effect completed in the segments of the cranio-spinal cord.

Segments of the cranio-spinal cord are liable to have their powers affected, exalted, or depressed, through an influence transmitted from the brain.

The following practical explanation of this last "law," though not new, is highly interesting, and worthy of being extensively known:—

It will be evident to every one, on reflection, that the influence which produces palsy in lesions of the brain, must be not a negative, but a positive influence. For palsy does not ensue in an animal from which one of the cerebral hemispheres has

been abstracted; but it ensues constantly upon trifling, as well as serious lesions of the brain, from partial disorganization of, or any matters compressing, one hemisphere. If palsy resulted from the withholding of some accustomed and necessary stimulus furnished by the brain, the effects would be the converse. Removal of a cerebral hemisphere would then always produce palsy; disease and lesion might occasionally. This positive influence, which travels downwards from the brain towards the palsied parts, is certainly transmitted by the anterior pyramids. For the palsy (*in unmixed cases*) always occurs in the opposite side of the frame to the cerebral lesion; and the interior pyramid is the only part of the encephalon in which fasciculi are reciprocally thrown across from the opposite halves of the brain or cord. Further, the point at which the anterior pyramid plunges into, or is continuous with, the centre and axis of the opposite half of the cranio-spinal cord, is the point of junction of the spinal cord and medulla oblongata. Here it implicates itself with the granular and filamentous texture that is continued in the axis of that half of the cord towards the brain in one direction, in the other down the spine. Now, if in the hemiplegia from cerebral lesion, the cause is a deleterious influence, propagated downwards along the anterior pyramid, and thence thrown upon the opposite chain of cranio-spinal segments, its strongest effects will consistently be manifested in those which first receive the shock, and the nuclei placed at the extremities of the chain will suffer proportionately less. But this is exactly what is observed in hemiplegia from cerebral lesion. If the case is moderately severe, the arm and face of the opposite side are alone palsied, either both or singly. The facts, as stated, are of daily recurrence; but their frequency was not seen, nor their nature understood, nor that of the following, which lay ungrouped without law or order, and in seeming inconsistency, till I proposed the explanation which I now repeat.

The chapter on the functions of the brain is to us unsatisfactory; but who has written in a satisfactory manner upon this dark and intricate department of physiology? Our author gives, we had almost said, a very meagre (though, so far as it goes, correct) description of the cerebrum and cerebellum, and as illustrative of the physiology of the cerebral structures, he refers to some of the vivisections of Magendie—to the physical conditions and progressive development of the encephalon in fishes, reptiles, birds, and mammiferous animals—to the value of absolute and relative size of the whole brain, as exemplified in inferior animals, and various races of men, and touches slightly on the doctrines of Gall and Spurzheim, and as a physiologist repudiates their doctrines, though as an "artist" his leanings are phrenological. The following are his views upon this department of physiology, or rather physiognomic craniology:—

I think, as an artist, that persons of good capacities, and of well ordered moral impulses, have heads of a certain size or figure, or both. 1. Of the two elements, *shape* appears to me of more consequence than size.—2. In a small head, the forehead should not recede, but should be broad or high; both together give most promise; and the upper part of the head must be round and full, not narrowing towards the vertex, nor the upper part of the sides of the head cut away. Length of head appears immaterial. The late Professor Coleman, whom I had the pleasure of knowing, a man of social and most amiable disposition, quick of observation, with considerable reflective powers, of a right heart and a strong head, had a cranium of which the posterior fifth appeared to have been obliquely sliced off. Shortness, indeed, but without so much abruptness, is almost necessarily a feature in well formed small heads.—3. If the head is altogether large and ample, a receding forehead does not seem to be at variance with the possession of high intellectual and moral qualities.—4. The head, in addition to being large, very lofty at the middle of the vertex,

the forehead sloping, is a mould which has gone with the highest intellect. In this mould was cast the head of Sir Walter Scott. The head of Shakespeare appears to have been similarly shaped.—5. A head of ordinary dimensions, the forehead vertical, but neither high nor broad, the vertex well rounded, and of a good height, frequently accompanies great parts. Such was the shape of the heads of Pitt and of Chatham. The forehead of Chatham was something broader than that of his illustrious son.—6. A large eye, with long eyelids, often accompanies eminent talent; and whether connected with the size of the orbit, or with development of the anterior and inferior convolutions of the brain, fulness and squareness of the superciliary region generally go with this feature. In the forehead of Newton, else nowise remarkable, this prominence and largeness of the lower part of the forehead are strikingly pronounced.—7. The head of Napoleon was characterized by its size and squareness, the forehead broad and vertical, and at the same time higher than ordinary; the eyes remarkably large, and the eyelids long. The largeness of the superciliary region was balanced by an equal mass above it. When large heads are met with in combination with dull capacity, their shape is commonly ungainly, and projections of bone, having no relation to cerebral development, catch the eye. The worst physical character is great lateral narrowing of the upper part of the head, with a coarse breadth at the lower and middle part, add to this a mean forehead, and want of symmetry of the two sides, and the portrait is yet deteriorated. The heads of the ablest and the best, whether large or small, generally look more carefully shaped, and better finished than those of commoner persons. The shape, too, in which they are fashioned seems better filled out, so that the bony boundaries are lost sight of, and the roundness or fulness of the contained organs is the predominant characteristic.

The short chapter "on the influence of the nervous system on the bodily organs," is both interesting and important. The functions of nutrition and re-production can be effected, as in vegetables, without the instrumentality of a nervous system; but when this system is superadded, as in animals, controlling effects upon the organization and functions are at once perceived. Mr. Mayo has, in a very few words, given a summary of these effects. The *sources* from which these influences are derived are the cerebral organs, the cranio-spinal cord, and the ganglionic system; and the *channels* through which the nervous influences may be conducted are the motor nerves, the sentient nerves, and branches of the ganglionic system. But although these facts are established, we can neither determine the nature of the influences transmitted, nor the limits respectively of each influence. We know that certain affections of the mind, and certain states of the brain and nerves, are adequate to produce certain effects, but we cannot appreciate the full force of a part, or the whole of the nervous system, upon the organism. We know that the phenomena of growth are independent of the cerebrum and cerebellum, for acephalous infants, in other respects well-formed and full-grown, are by no means uncommon; and we know also, that a violent concussion of the brain will destroy life; we know that the lesion of a nerve affects the nutrition of a part; we know, too, that a relation of some kind exists between animal heat and nervous power; and we know that secretion is also influenced by the state of the nervous system, but the manner in which these effects are produced cannot be condescended upon. Our author justly remarks,—

Affections of the mind are capable of altering the rate of the circulation instantaneously, and of the secretions, and of the blood, and of disturbing digestion, and even growth. Fear will cause the heart to beat feebly, and even to stop. Grief will depress its action. Fear, rage, passion, will produce paleness; shame and indignation flushing.

The influence of fear on the kidneys and on the bowels is well known. The imagination will cause the saliva to flow, and it is said in animals will maintain the secretion of milk. Shame on sudden detection has produced jaundice in the course of a few minutes. A loathsome idea will cause vomiting; strong mental excitement will stop digestion. Fear and anxiety are said to have turned the hair grey in a single night.

The chapter on perception, with which our author closes his survey of the various functions, is, in our opinion, both original and profound, and treated not in a purely metaphysical manner, but by the lights which anatomy and physiology can elicit. As perception is the result of sensation, the sensations we experience are arranged and briefly discussed with no ordinary clearness and acumen. According to our author, our sensations are of two kinds, internal and external. The *inward* sensations are those which appertain to the appetites, and to every condition of the corporeal frame; and the *outward* sensations are those of smell, taste, heat and cold, contact, of the muscular sense, sight, and hearing. Some interesting remarks are made regarding the ideas suggested by the organs of sensation; some suggesting only the idea of locality; others of locality and outness, or externality; others besides these, of direction; others of figure, magnitude, distance, and motion. The following remarks on the muscular sense are both novel and interesting:—

The muscular sense immediately feels resistance and motion, and is attended with the idea of force exerted, is an inward sensation, and with distinct conceptions of outness, locality, and direction. The sentient organ of the muscular sense is the voluntary muscles. The nerves which minister to it are derived from the ganglionic fasciculi of the fifth cerebral, and of the spinal nerves. The sensations which suggest to us hardness, softness, weight, lightness, pressure, yielding, support, want of support, are evidently modifications of the feeling of resistance; but they are so mixed up with the impression of something without as their cause, that the terms convey notions of the qualities of bodies, rather than the sensations they excite, or bring to our minds objective, rather than subjective conceptions. Sensations of touch often combine with those of the muscular sense. The sensations we have of aeriform, liquid, or solid resistance, for example, are united with, and perfected through, the actual feelings excited by these different contacts. Our notions of elasticity, and of the impenetrability of matter, are ulterior conceptions founded on the sense of resistance. Our abstract conception of motion is rendered as if it were sensible to us through this channel. Our abstract notice of force in the same way is realized to the mind through this sense, and is indeed exclusively derived from it.

In general, the muscular sense is excited by muscular exertion, and goes with it as its measure. But there are certain sensations which are felt when no muscular exertion is being made, which yet seem to belong to the same source. I allude to the sensations experienced on being lifted, or allowed to sink; for instance, on board ship when you are lying on the back making no muscular effort, the difference to your sensations is most distinct, produced by the vessel rising or sinking on the water. This sense of support and want of support, what is its seat? I am disposed to think it is still in the muscles. For when we lie perfectly still, we yet have a general sensation of the weight of our body and limbs. I conjecture that feeling to be dependent on the degree of muscular contraction called tone. The sensation of want of support, however, combines further elements.

Upon the whole we are inclined to think most favourably of the work before us. If it is not calculated to increase the fair fame of its author, neither will it diminish it. As a good summary of facts and deductions on a most important department of physiology, we can recommend it, and shall be happy to meet the

author at no distant period in a more original dress than that, in which he has thought proper to appear in the present instance.

MEDICAL MEMS. OF THE WEEK.

By PERISCOPICUS.

AMMONIACUM.—Dr. Pereira possesses an authentic sample of the gum resin called *African Ammoniacum*, brought from Morocco, and therefore identical with the *ammoniachon* of Dioscorides. Though, in external appearance, it resembles Persian ammoniacum (the ammoniacum of the shops), its odour when heated is dissimilar, so that the ammoniacum of ancient and of modern times are not identical. African ammoniacum is the produce of *ferula tinigitana*. He has also in his care a beautiful specimen of the upper part of the flowering stem of the Persian ammoniacum plant, with lumps of the gum resin sticking to it, at the origin of every branch. It was gathered in Persia, by Sir J. McNeill.

SMALL-POX.—Dr. Reiter, physician in Bavaria, variolated fifty cows, and once succeeded in getting a pustule, the matter of which he employed on a child, and succeeded in Hanover likewise in producing pustules, but alarmed by a secondary eruption of vesicles, he took the disease for variola, and discontinued the propagation. The experiment was, however, as it were, accidentally continued, and afforded a most valuable proof of the identity. The cow which had produced the pustule stood in the same stable with another, and the latter about three weeks afterwards showed excellent cow-pox. The same happened in another stable, and from both these infected cows children were inoculated, and showed very fine, well characterised cow-pox. This observation, though not taken as a proof by the author himself, is fully entitled to be added to the experiments of Thiele and Cely in favour of the question of the identity of *small* and *cow-pox*.

WOUND THROUGH THE STERNUM AND THE ARCH OF THE AORTA.—The peculiarity of this unique case is, that the wound was made with a common dinner-knife, only moderately sharp at its point, and its edge three and a half inches long, and three-fourths of an inch broad. With this a man stabbed his wife up to the hilt. She died in an instant, and the wound was found to have passed through the upper part of the sternum, into the arch of the aorta and the right lung. The bone was cleanly pierced, without any fracture or splintering.

OPHTHALMIA.—Mr. Alexander of Corsham invariably treated the purulent ophthalmia of new-born infants with forcible syringing, first of cold water, afterwards one syringe full of weak zinc solution every second hour, until the cure was effected, which was generally in a short time, according to the diligence used. The surgeon must do it himself a few times, and be very strict with the nurses, or they will not attend, and mere applications or washings outside are worse than useless. The eyelids must be fairly puffed up like a distended bladder with the injection, though it occasions great distress at the time, and requires some firmness in doing it properly.

RESPIRATION.—It is a mere paradox, says Rudolphi, when Magendie, contrary to Haller and all other anatomists and physiologists, admits the movement of the first rib to be greater than that of the following; for if he only undertakes to examine, without prejudice, the ligaments and muscles of the first rib, he must immediately retract his false views, which can only have arisen in the study, or in a transitory observation of an artificial skeleton. Whence comes it that the first rib so very often morbidly

adheres to the sternum, if it be not because it lies almost immovable upon it; whilst the sternum and clavicle are scarcely ever ankylosed, from the movement between them being greater?—The movements of the chest in the mammalia are probably exactly the same as in man; and we see this in a very strong degree in the so-named "beating of the flanks," especially in the horse. In all, the diaphragm and abdominal muscles perform the same functions; but not unfrequently the cartilages of the ribs become ossified very early, by which they resemble birds; in whom, as far as I know it is without exception. In our museum there are skeletons of the ornithorinchus; of the three-toed sloth; of the ant-eater; myrmecophaga jubata; tetra dactyla, and didactyla dasypus sexcinctus, of two vampires, of a couple of opossums, of an old *dispus sagitta* (for in the other skeletons of *dipus* and *meriones* it is not), of an old mole, and of *chrysochlorus*, which are provided with intervening bones instead of cartilages of the ribs. In some of the last-named animals the ossification appears not to have occurred so early as in the others. The difficulty of the cartilages of the ribs (except the first) becoming ossified in man is generally known. Indeed, we have the example of Thomas Parr, who was a hundred and fifty-two years and nine months old; and in whose body the renowned Harvey found those cartilages unossified. The whole of this remarkable dissection is found in I. Bettus de Orta et Natura Sanguinis, London, 1669.

IMPORTANT OPERATION.—James Plunkett, ætat. 20 years, was, at the age of nine months, attacked with fits of such violence as to cause paralysis of the right side, including the face and tongue. The hair was observed to fall from off the right side of the head, leaving the scalp quite bare; the right superior extremity was contracted to such a degree as to bring the dorsum of the hand in contact with the posterior part of the crest of the ilium, where it was forcibly retained. However, by perseverance on the part of his aunt with friction and other remedies, the arm was restored to its proper position, and the use of the shoulder and elbow-joint partially recovered, but the wrist defied all efforts on the part of several medical men, who ultimately declared the case hopeless. The fits returned in his third, fifteenth, and eighteenth year, but not with such violence, and since that period he has not been troubled by them. On the 4th of March, 1842, he placed himself under the care of Mr. Earle, of Alfred Place, and on examination the right superior extremity was found affected with paralysis of a high degree; the patient could by considerable efforts partially rotate the shoulder-joint; he had no power of motion in the elbow-joint, but by holding the shoulder and fore-arm with both hands, Mr. E. was enabled to flex or extend the joint in a restricted manner. There was no motion whatsoever between the radius and ulna. The wrist-joint was considerably bent by the contraction of the flexor, and elongation of the extensor muscles; the palmar surface of the hand was drawn upward and inward towards the fore-arm, with which it formed an angle of 38 degrees; the external edge of the hand was drawn laterally by the contraction of the flexor carpi ulnaris. The whole limb was totally insensible, even to the prick of a pin, or being violently pinched, and conveyed a cold, clammy sensation on being touched. In cold weather the hand assumed a livid bluish appearance. The lower extremity was slightly paralysed, as was also the tongue and right side of the face, which gave his features a peculiar expression not easily described. Finding that although the whole of the flexors were implicated, yet the flexor palmaris longu

and flexor carpi ulnaris offered the greatest resistance on attempting to straighten the wrist, Mr. E. determined to divide the palmaris longus first, and defer the other to a future period to see whether extension would have any effect on it. On the 7th of March, assisted by R. R. Storks, Esq., and in the presence of Professor W. Fergusson, of King's College, and also in the presence of an eminent professor of the Faculty of Medicine of Paris, he performed the operation in the following manner:—"Having placed the patient sitting on a chair, with his arm resting on a table, the wrist was extended as much as possible, in order to bring the tendon more prominent. I then passed a narrow-bladed straight knife on the radial side of the tendo palmaris longi, by directing its point downwards and inwards towards the ulna, so as to bring its cutting edge in contact with the posterior surface of the tendon; the handle of the knife was then depressed and the section instantly accomplished by a slight sawing motion. On withdrawing the knife a slight flow of blood took place (about two drachms) which was immediately checked by compression with the fore-finger; a small piece of adhesive plaster was then applied to the wound (which was but three lines in extent) and the arm bandaged on a splint. Whilst dressing the hand I was exceedingly surprised to find a genial warmth and high degree of sensibility in the whole extremity, which was cold and insensible previous to the operation. On questioning the patient I found that he was conscious of the change which had taken place in the warmth of the limb; to use his own words, 'during the operation I felt a sudden shock as if from electricity, rush up my arm to my head and neck, which made me sick and giddy. I then fancied that warm water was suddenly poured over my hand and arm; from that moment the warmth remained, and I could feel your fingers touching my hand.'—On the 14th of March the hand formed a straight line with the arm; since that time it has continued improving, and he can now use the finger slightly, and I have no doubt that he will in a few weeks have the entire use of the hand."

ACUTE HYDROCEPHALUS.—This is often so intractable a disease, that we should be glad to find out some more potent remedy than has hitherto been discovered. Dr. Roesser gives us a case where he employed large doses of the iodide of potassium. The child lay quite insensible, pupils fixed and dilated, complete paralysis of one side, face flushed, body bathed in perspiration, and all the other symptoms denoting the last stage of the disease. One drachm of the iodide of potassium was dissolved in half an ounce of water, thirty drops of this solution were given every hour in a little water; one drachm of the iodide was at last given in twenty-four hours, and then the good effects appeared; in short the child rapidly recovered without any other bad effects than a crop of boils. In the administration of iodine, Dr. Mojsisovitz, of Vienna, throws out some useful hints. Feculent matters decompose the preparations of iodine, giving rise to ioduret of starch in the stools of those who eat bread, potatoes, rice, gruel, and vegetables, while taking this medicine. It is necessary, therefore, to interdict the use of all substances containing fecula while iodine is being given. This may account for the fact of such large doses of this medicine being occasionally given without either bad or good effects. Dr. M. disapproves of the tincture of iodine, which he says is more likely to cause a wasting of the testicles or mammae, hæmoptysis, &c., than any of its salts. He prefers the hydriodate of potash, or the proto and deuto-iodurets of mercury. He gives about fifteen grains of the hydriodate daily, which we

think might be considerably increased without danger; his ointment for tumours is composed of two parts of proto-ioduret of mercury and twenty-four of lard.

POISONING BY STRAWBERRIES.—Dr. Sigmund, of Vienna, has described an instance of poisoning by strawberries, which had been kept for a few hours in a vessel coloured green. The master and mistress of the house, and the servant, who had partaken of them, complained of nausea and vomiting, with considerable weakness, followed by burning heat at the stomach. These symptoms continued two or three days. Chemical analysis showed that the green colour of the vessel was owing to the presence of the arsenite of copper.

SPINAL DISTORTIONS.—In an article in the Gazette Medicale M. Guerin refutes the objections raised by M. Bouvier, against his theory of the dependancy of spinal distortions on muscular contraction, and the applicability of tenotomy to their cure. According to M. Guerin spinal distortions should be classed with club-foot, wry neck, &c., and as the muscles of the foot, leg, knee, &c., by their contractions produce certain deformities, which, arising from the same cause, (perverted muscular action,) present the same general character, and require division of the contracted muscles; so curvature of the spine depends on the contracted state of the muscles of this region, and requires for its cure their division.

ARRESTING OF DENTAL HÆMORRHAGE.—Plaster of Paris is strongly recommended for this purpose. When it is considered how rapidly plaster of Paris absorbs moisture, it must soon become coated with the coagulating principle of the blood, which is left in a manner dry upon the plaster, and from the plastical nature of plaster of Paris when moistened, it may be so completely pressed into every little depression of the alveolus, and consolidating there, be the most perfect plug that could be applied, being held down for a few seconds by the finger until hardened. Another gentleman recommends the replacing of the extracted tooth, and says that it is the most certain and easy remedy he has ever found, and that in a few days it becomes firm and often serviceable. The superiority of this practice over every other is evident, he says, from the impossibility of fitting any substance to the cavity so accurately as the tooth which had been previously extracted, and which, unlike cork, sponge, lint, &c., need not be removed.

ELASTICITY OF BRAIN.—Mr. Solly concluded, from considerable experience, that no fact can be more clearly established than that the brain is an elastic, and, therefore, compressible organ, and of course may contain more blood at one time than another. He has examined the brains of many lunatics, and is convinced that insanity is invariably dependent on inflammation of the hemispherical ganglia. He adds, that the present mode of treatment generally pursued in insanity is a disgrace to the medical profession.

HARE-LIP.—Dr. Peckles says, a healthy infant, a few days old, with single hare-lip was brought to me. The parents were anxious to have the deformity removed. The child being about three weeks old, I cut the edges with a sharp scissors, and united the cut surfaces with two long and fine worsted needles in the usual manner, and covered and supported the parts with adhesive plaster; no bandage was required. In thirty-six hours I removed the upper needle, and on the third day the lower, as it was causing ulceration by its pressure, when I found the edges of the incision united. Cold cream spread upon lint and retained by two strips of adhesive plaster, extending from ear to ear, completed the cure in a few days, which

in fact was only delayed by the ulceration caused by the second needle.—The satisfactory termination of this case proves the advantage of an early operation. Very little blood flowed into the mouth; none was swallowed; the child only required four days' spoon-feeding after the last needle was removed, or seven from the day of operation, and at the end of this time it took the breast freely.—In a case of double hare-lip, upon which I operated lately, assisted by Dr. Bellingham, where the child was four months old, the contrast was remarkable; the little patient offered considerable resistance during the operation; and subsequently gave much trouble by its constant endeavours to tear off the dressings, so that it required to be closely watched, besides anodyne medicine to quiet it.

MEDICAL NEWS.

KING'S COLLEGE MEDICAL DEPARTMENT.—The following were the successful candidates for honours, &c., this year:—Medical Scholarship—Scholar elected, George Johnson; prize, Thomas Inman. Medicine, Surgery, and Midwifery—First prize, George Johnson; second prize, John Percival. Materia Medica and Physiology—First prize, William Henry Parsey; second prize, Alfred B. Andrews. Anatomy and Chemistry—No first prize awarded; second prize, B. L. Jemmett. Botany—J. Baxter Langley. Forensic Medicine—Robert Phipps Dodd. Comparative Anatomy—Alfred C. Barker. Medical Society's Prize—First, George Johnson; second, John B. Langley. Warneford Prizes—First gold medal and books, George Johnson; second ditto, George P. Atkinson. Leathe's Prizes—F. J. Henley and Boughton Kingdom. Medical Associates—George Jackson, Boughton Kingdom. Certificates of Honour in Medicine, Surgery, and Midwifery, to H. J. Hunter, R. W. Woolcombe, and J. G. Grylls—Materia Medica and Physiology, to S. H. Steele and Thomas Hawksley—Anatomy, to C. Barrett and R. Roberts—Botany, to M. S. Todd, S. Blount, S. M. Steele, and H. S. Lyford—Forensic Medicine, to John Percival, E. Thomas, and C. W. Mann.

BRENTFORD.—The medical practitioners of Brentford and its vicinity have resolved to form themselves into a society, to be called the "Brentford Medical Association," for the purpose of friendly intercourse and mutual advantage. It will be open to all the medical men in the neighbourhood who may wish to join it, and there can be no doubt will be extremely conducive towards keeping up a good feeling and fellowship among its members, and tend to sustain the character of the profession by the unanimity it must engender. We should be glad to see such societies in every district; they could do more to suppress quackery than almost any other means we know of.

MEDICAL CHARITIES BILL.—An exceedingly important meeting of the profession took place in Cork, on Tuesday, the 12th inst. On Dr. J. O'Neil, of Fermoy, taking the chair, at least a hundred and fifty of the most influential medical men of the neighbourhood were present. Drs. Wood, Ormslow, Murphy, Lloyd, Harvey, Jagoe, Armstrong, Haines, Grattan, Bull, Mc Mullen, Edgar, Beamish, Tanner, Osburne, Lamert, Townsend, Cotter, O'Brien, Paye, Harris, Wood, moved and seconded various resolutions strongly condemnatory of the different clauses of the proposed bill. The speeches of the secretary, Dr. Corbett, Dr. Wood, and Dr. Murphy were extremely telling, and we could wish that our space enabled us to publish them. A few more demonstrations of this kind, and we shall begin to have hopes of our profession.

PRESENTATION OF PLATE.—The Committee of Officers of the Medical Department of the Army appointed for the purpose of expressing to Mr. Guthrie their sense of the kindness and liberality with which he had placed his lectures and hospital instructions at their services for many years, delivered to him on Tuesday, the 10th of May, a Service of Plate, bearing the following inscription:—"To G. J. Guthrie, Esq., F.R.S., &c., &c., &c. This Service of Plate has been presented by Three Hundred Officers of the Medical Department of the Army, the companions of his early military service, or the pupils of his instruction. They desire to record by it their high sense of his liberal and distinguished conduct on every occasion, as well as to express their sincere affection and esteem.—London, April, 1842."

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List of gentlemen admitted members, on Friday, May 13th, 1842:—

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Admitted Monday, May 16th, 1842:—

Erasmus Stone, Thomas Herbert Barker, Thomas Philip Dennett, Richard Lead Madrox, William Henry Cane, William Brumfit, Farquhar Milne, John Gordon.

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ERRATA.—Page 101, third column, six lines from foot, place a dash thus — after the word illustration; 101, first column, five lines from foot, in Dr. Clay's paper, for "granular," read "glandular;" 111, first column, eleven lines from foot, for "castor oil," read "croton oil."

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A Journal of English and Foreign Medicine and Medical Affairs.

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Delivered at the Hospital La Charité, by Professor CHOMEL.

LECTURE XVII.

IV. *Pulmonary Apoplexy*.—Pulmonary apoplexy presents some symptoms bearing an analogy with pneumonia, such as the sensation of suffocation, the great difficulty in the respiration, the cough, the red-coloured expectoration, and sometimes pain in one side of the chest: some of the phenomena of percussion and auscultation may also be distinguished in a circumscribed portion of the lung, as a considerable diminution, and sometimes even the complete cessation, of the respiratory bruits, together with the existence of bronchophony in the same part, a diminution in the vibration of the voice, and obscurity or even dulness on percussion. Around the circumscribed portion, also, where we observe these phenomena, we find the signs of active pulmonary congestion, and a little further, and throughout the whole extent of the chest, the supplementary character of the respiration, which is most marked towards the limits of the diseased part. Laënnec states that he has observed, on a level with the apoplectic effusion, a distinct crepitant râle, while the mucous râle was discernible at the root of the bronchi. This crepitation, which depends on the apoplectic effusion itself, or else on the hæmoptysis which most commonly accompanies it, combined with the other symptoms of which I have spoken, constitutes a group bearing some analogy with circumscribed pneumonia. But we find a distinction between these two states in the mode of invasion in apoplexy, which is abrupt and instantaneous, sometimes rapidly reducing the patient to an imminent state of asphyxia, which could scarcely occur in a pneumonia limited to so small a space. In pulmonary apoplexy, also, there is an absence of the prolonged and intense shivering; the sputa, instead of being pneumonic, resemble those of hæmoptysis; they are almost uniformly composed of blood, sometimes of a deep red colour, are so devoid of viscosity as to be incapable of adhering to the sides of the vessel, and possess no transparency; there is no febrile reaction in recent pulmonary apoplexy; on the contrary, the pulse is sometimes smaller than natural, irregular and unequal. Lastly, the various local phenomena characterizing apoplexy are limited to the same point for some considerable length of time without extending to the surrounding parts, whilst in pneumonia there is almost always a constantly progressive tendency.

V. *Œdema of the Lung*.—Œdema of the lung is sometimes acute, sometimes chronic. In either case, we observe some symptoms which form a resemblance to those of pneumonia; such as the obscurity of sound furnished by percussion, the diminution in the vibration of the voice, slight bronchophony in well-marked cases, a diminution in the inspiratory and expiratory movements, especially those of inspiration, and a subcrepitation

which strongly resembles the true crepitant râle. But these symptoms offer marked differences with those presented by pneumonia; thus, in the latter affection, the dulness becomes complete, the vibration of the voice may be entirely absent, while bronchophony and bronchial respiration are very marked; the crepitation is characteristic, and very different from the vesicular râle, with fine, distinct, and rounded bubbles, which are formed in slow and regular succession, and not by puffs; bubbles which in many cases present a degree of inequality, and are accompanied by a watery species of humidity. Again, the râle of œdema is always produced in the most depending parts; it most frequently affects both lungs at the same time, or if it occupy but one organ, it may be carried alternately from one side to the other, or even forwards, according to the position assumed by the patient. I may also add, that the functional disturbances vary in the two disorders; there is but little dyspnoea, no pain in the side, a serous expectoration, and little or no fever in œdema.

VI. *Asphyxical Phthisis*.—There is a variety of acute primitive phthisis which M. Fournet proposes to call *asphyxical*, and which, by its rapid progress and by several of its symptoms, might to a certain point simulate acute pneumonia complicated with bronchitis. The commencement of this form of phthisis is ordinarily abrupt, the dyspnoea is very great, and forms its principal character; the patient is in a state bordering on suffocation; the face is turgid, of a brownish red or violet colour; the fever is very marked; the progress of the disease so rapid, that emaciation has not time to occur, and the disease sometimes terminates by delirium. At the autopsy, we find the lungs invaded over a large extent by a multitude of milary tubercles; the remainder of the parenchyma is greatly engorged. The tubercles are sometimes so abundant, that the lungs are as solid and heavy as in hepatization. This form of phthisis, which is very rare, simulates pneumonia complicated with bronchitis only in its outer aspect, for the local phenomena easily distinguish the two diseases. In this phthisical affection there are neither the pneumonic sputa nor crepitation; the expiratory bruit is augmented, that of inspiration diminished; these bruits are remarkably hard and dry, and have somewhat of the bronchial character. These phenomena, instead of being confined to the summit of the lungs, are irregularly scattered over the whole anterior surface of the chest, and almost equally upon one side as the other; lastly, the sound is obscure in some points, clear or exaggerated in others.

VII. *Pericarditis and Organic Affections of the Heart*.—Pneumonia might simulate acute pericarditis with effusion, where the portion of lung, which is not unfrequently situated in front of the heart, has become completely hepatized. In this case, bronchial respiration is frequently wanting; the rusty-coloured sputa may also be absent, and unless we have watched the commencement of the disease, and have been able to discover the presence of crepitation, we have merely a few functional signs of pericarditis to guide us by; such as rapidity and irregularity of the pulse; irregularity, confusion, or even the more or less complete absence of the heart's bruits. And even, then, these phenomena will be but of feeble aid, since the existence of inflammation in that portion of the lung lying in front of the heart will sometimes give rise to feebleness and irregularity of the pulse, together with jactitation, orthopnoea, &c. Still I may remark that it is exceedingly rare (if even some examples have been mentioned) to find the inflammation limited to the anterior layer of the lung; it most commonly spreads, and on auscultation we shall discover towards the limits of the hepatized portion a more or less marked crepitation. Organic disease of the heart might be confounded with pneumonia in those not unfrequent cases which

are met with especially in old men, where the bronchitis and bronchorrhea accompanying organic affections of the heart are attended by an expectoration of a rusty colour or similar to the juice of prunes, and where the stagnation of the blood in the lungs gives rise to dulness on percussion, as well as the development of the subcrepitant râle and the bronchial souffle. The progress of the affection is in these cases most likely to clear up the diagnosis; the treatment will be similar in either disease, since under the influence of a copious blood-letting we shall see all the symptoms quickly disappear.

VIII. *Aneurism of the Aorta*.—When a large portion of the thorax is occupied by a very voluminous aortic aneurism, and when also from the attenuated state of the coats of the vessel a small quantity of blood escapes into the trachea, the dulness of sound and the bloody expectoration might induce the practitioner to believe in the presence of pneumonia. An example of this kind was noticed under the care of M. Louis, and another is related by M. Rostan.—A woman, 60 years of age, complained of pain in the left side and posterior part of the chest; the sound was dull and the respiration difficult; the cough was attended by a bloody expectoration; the pulse was quick and hard, the skin hot, and there was great thirst; on the opening of the body the lung was sound, but there was an enormous aneurism of the aorta. Auscultation would, however, scarcely leave a doubt in cases of this kind. The progress, the duration, and the previous history of the disease, would also clear up the diagnosis.

IX. *Hepatitis*.—It is impossible at the present day, with the aid of percussion and especially of auscultation, to confound hepatitis with the second or third stage of pneumonia; these modes of investigation, however, require great tact and attention. I may add, that when any doubt exists between hepatitis and pneumonia of the right side complicated with jaundice, the rarity of hepatitis in our climate on the one hand, and on the other the frequency of pneumonia, and the influence which it exercises over the liver when the right lung is affected, should lead us to suspect the existence of the latter disease. Abscess of the liver opening into the bronchi might be mistaken for abscess of the lung, unless the disease had been seen from its commencement. The diagnosis should be founded not only upon the characters proper to hepatitis and pneumonia, but also in an especial manner upon the presence or absence of some elements of the bile in the expectorated matters; chemical analysis would, I think, easily ascertain this fact; besides, the odour of the sputa, which is sometimes exactly similar to that of faecal matter in abscess of the liver, would also serve to guide us in our diagnosis in doubtful cases. I can here merely refer *en passant* to those cases of enlarged spleen in which this organ presses up against the left ribs, or where the left lobe of the liver has become considerably tumefied; by means of auscultation, we shall easily avoid all error.

X. *Typhoid fever*.—In some cases of pneumonia occurring in infants as also in adults, we might be apt to credit the existence of typhoid fever, were it not that percussion and auscultation, as well as the progress and duration of the affection, clearly indicate the nature of the malady.

GENERAL OR MEDICAL DIAGNOSIS.—Having recognised the seat, the extent and degree of the pneumonia, and having also distinguished it from those affections with which it may present any analogy; in a word, having established the local or anatomical diagnosis, we must then study the general or constitutional state of the patient. This general or medical diagnosis is of the highest importance in a therapeutical point of view. We must carefully ascertain whether the vital powers be induced with greater energy, as is commonly the

ease, or whether they be depressed or perverted; whether the blood, by its excessive *fibrinization*, has a great tendency to coagulate, even during life, or whether, on the contrary, it is serous or altered in its nature by admixture with various substances formed in the economy itself, as bile, pus, the virus of small-pox, measles, &c., or acted on by different deleterious agents produced without, as marsh-miasmata, putrid and poisonous exhalations, &c. These researches are intimately connected with the study of the *complications* and the *treatment* of pneumonia. Thus, we have the various forms of *adynamic*, *pseudo-adynamic*, *ataxic*, *bilious*, *metastatic* or *purulent*, *puerperal*, *typhoid*, *exanthematous*, *scorbutic*, *intermittent*, and *epidemic* pneumonia. We shall also see that *age*, *sex*, certain *constitutions* and *idiosyncrasies*, especial *habits*, that of drunkenness in particular, and many other circumstances, powerfully modify the general state of the patient, the pulmonary lesion often remaining the same in appearance, but requiring various and frequently opposite modes of treatment.

COMPLICATIONS OF PNEUMONIA.—On making an examination at the bed-side of a patient attacked with pneumonia, after ascertaining the existence of this affection, we must satisfy ourselves whether there may not exist some other local or general disease at the same time; in a word, we must be certain if the pneumonia be the only disease, or whether it may not constitute but one of the elements of the morbid condition of the subject; that is to say, whether it be *simple* or *complicated*.

* Now, a great number of diseases may supervene in the course of pneumonia, as, in like manner, pneumonia may be developed during the continuance of another malady. The following resumé, for which we are indebted to M. Barth, will in some measure indicate the proportion which exists between simple and complicated pneumonias. In a first series composed of eighty cases, the pneumonia in ten supervened as a complication during the course or towards the end of some grave disease, such as typhoid fever (seven times), Bright's disease (once), phthisis (once), and scarlatina (once); in the other seventy, the pneumonia was simple fifty-eight times, catarrhal six times, accompanied with emphysema and disease of the heart twice, and with emphysema alone three times; in one case, the pneumonia was traumatic. In a second series, the number of patients was sixty-six; in eleven of them the disease supervened as a complication upon some other fatal malady, or in individuals already weakened by a previous disease of long standing. The simple pneumonias, or such as occurred in sound subjects or those labouring under some affection of a slighter character, as emphysema, &c., were then fifty-five in number. I shall return to these cases when speaking of the prognosis of the disease. The complications of pneumonia consist sometimes of local lesions, and at other times of general diseases; sometimes they are intimately combined as cause or effect with the pneumonia, at other times they are merely accidental, occurring as simple coincidences; still, in the latter case, they deserve to fix the attention of the practitioner, since they frequently modify in a very remarkable manner the diagnosis, as well as the prognosis and treatment of pulmonary inflammation. I shall divide the complications of pneumonia into two groups, according as they are *local* or *general*; the first may be seated in the respiratory apparatus, the circulatory system, the digestive tube, the secretory organs, the nervous and the muscular systems. The second have reference to the general state of the entire system. This division, although liable to some objections, is, I consider, one of the best that can be adopted.

LECTURES ON CHEMISTRY.

By JOHN SCOFFERN, Esq., Lecturer on Chemistry at the Aldersgate School of Medicine.

CONTINUING our investigations relative to the effects of heat in diminishing cohesion, we are led to the consideration of evaporation and ebullition, operations of a highly important and interesting nature, whether we regard them as confined to the laboratory, or as part of the grand economy of the world.

We have already endeavoured to investigate the connexion which exists between heat and fluidity; we have seen that fluids may be regarded as bodies originally solid, but deprived of a portion of their cohesion by the agency of heat; we have seen, moreover, that the degree of temperature at which a given substance becomes fluid is invariable, and we have demonstrated that during this change there occurs a great conversion of heat into a latent form; we will now see if any analysis can be traced in the operations of evaporation and ebullition. By the application of a greater degree of temperature than is necessary to produce melting, the generality of fusible bodies may be changed into vapour, that is to say, they may be converted into a state of still diminishing cohesion. Theory leads us to believe that all substances in nature might be vaporized if only we could apply a sufficient degree of temperature; the truth of this supposition, however, we can scarcely hope to demonstrate.

During evaporation, there always occurs a great absorption of heat, which, in the phenomenon of liquefaction, becomes latent, or insensible; so far, indeed, the analogy between liquefaction and evaporation is perfect, but although liquefaction occurs at one invariable temperature, there is no such limit to evaporation. Water, for instance, probably evaporates at all temperatures; I do not mean only in the liquid state, but when in the forms of ice or snow, this having been proved at temperatures considerably below the freezing point.

In order to render our ideas more precise relative to elastic fluids, it has been usual to regard them under three points of view, namely, those which were supposed to be invariably elastic and incompressible, otherwise called *gases*—those resulting from bodies, usually liquids, occasionally solids, *silently*, at variable temperatures—and, lastly, those resulting from liquids at *invariable* temperatures, other conditions remaining unchanged, *not silently*. The term evaporation has been usually limited to the second operation, and the term boiling is always applied to the third; the result of either operation being denominated vapour, whilst steam is the term often applied to vapours resulting from boiling alone. It will be most instructive for us to limit our first remarks to the operation of boiling, leaving the circumstances attendant on the formation of vapours at low temperatures for a future consideration. When treating of liquefaction in my last lecture, I occupied some time in demonstrating the invariable disappearance during this operation of sensible heat; now the same disappearance occurs in the present instance, but acting on the supposition that my recent remarks are still remembered, I shall not enter much into detail on a subject so analogous.

All liquids boil on the application of a sufficient degree of heat, and under certain conditions we find that the boiling point of each liquid is invariable. Suppose we limit our remarks at present to the liquid water. If we place a vessel containing this fluid over a source of heat at the ordinary level of the sea, and immerse in it the bulb of a thermometer to appreciate the degree of temperature applied, we shall find that as soon as the mercury stands at 212 deg. of Fahrenheit's scale, the water begins to boil. If the position chosen be higher than the sea's level, then the barometric column will no longer be 30 inches, and the boiling point of water will be diminished. This is a most important fact to remember, and the consideration of which cannot fail to display the operation of boiling in its true light. We learn that boiling is not dependent on heat alone, in the ordinary acceptance of the term, but is merely the resultant of two forces acting on a liquid in opposition to each other. Heat within exerts a pressure determining the particles of a fluid outwards, and the atmosphere without exerts its pressure in another direction. Supposing both forces to be exactly balanced, the phenomenon of boiling cannot result, but no sooner does the repulsive agency of heat become greater than the counteracting one of atmospheric pressure, than the particles of the fluid are violently separated from each other, form bubbles of elastic matter, which escape as vapour or steam, and give rise to the phenomenon of boiling. In order to demonstrate more fully the truth of these

remarks, I may exhibit to you a very common experiment, the boiling of a liquid produced by removing atmospheric pressure. Into a test tube I put a little ether, a liquid, as you are aware, of very attenuated nature, and exceedingly prone to be dispersed in vapour;—this test tube I place under the receiver of an air-pump, and on removing atmospheric pressure you will observe that it boils. In this instance I have not applied any source of heat, but merely removed pressure, so that the quantity of heat always present in ether was sufficient to exert a greater pressure from within than there was encountered opposition from without.

The experiment just performed, if slightly modified, may be rendered still more instructive. I now immerse the tube containing the ether in a small portion of water, and exhaust as before. Under these circumstances the ether boils as previously, but the water at the same time freezes. The result of this experiment, although apparently anomalous, admits of very easy explanation, and is simply this:—Vapours during their formation absorb a large amount of heat, which they render latent. This heat, in the present instance, was abstracted from the water which consequently froze.

Water, indeed, may be frozen by the cold produced during its own evaporation. Into the receiver of an air-pump I put a shallow vessel containing water, standing over some concentrated oil of vitriol. On working the pump vigorously, observe the water freezes. The use of the oil of vitriol is simply to absorb the watery vapour as it rises, and which could not be conveyed away by pumping with the requisite degree of velocity.

Evaporation under every circumstance abstracts heat, and hence the rationale of many useful instruments employed as coolers. There are better coolers, for example, formed of a porous earthenware, through which water percolates, and by evaporating abstracts heat from within.

It appears, then, that the boiling point of a fluid is entirely, or *almost entirely* dependent on the amount of atmospheric pressure, and naturally varies according as the source of heat is more or less elevated; on the summit of Mount Blanc, the highest point of Europe, water has been found to boil at 184. I have just alluded to the fact, that atmospheric pressure is not exactly the *only* cause determining the boiling point, although the one which I am about to notice is so trivial as to be generally overlooked under ordinary circumstances. I allude to the alteration of the boiling point in virtue of a certain agency of *surface*. For example—in glass, or in glazed porcelain vessels, water boils under a pressure of 30 inches, not at 212, but at 214 deg.; hence the necessity of using a metallic vessel in graduating thermometers. It would appear that the little irregularities on the surface of metal favour the process of ebullition by affording nuclei, around which the bubbles of steam necessary to constitute boiling may congregate.

This property of metals may be taken advantage of in many chemical operations; for example, suppose I have to distil a portion of sulphuric acid in a glass retort—sulphuric acid is a substance not easily volatilized, its ordinary boiling point being 630 deg.—but I can reduce this several degrees, and render the operation much more easy of prosecution than it would be otherwise, by projecting into the retort some pieces of platinum, foil, or wire. Scarcely any other substance would have answered our purpose in this instance, but any metal, or, indeed, a fragment of *any solid*, metallic or non-metallic, when dropped into a liquid, will answer the end intended more or less perfectly; but it is evident that if we use a solid on which the liquid can exert a chemical action, a great inconvenience must arise; hence platinum, from the difficulty it possesses of being acted on chemically is more valuable for this purpose than any other solid.

Nothing can be more evident, after the demonstrations we have just witnessed, that the term boiling point must always be somewhat ambiguous; however, as the elevations at which liquids are usually boiled do not vary much, and as there is just as little variation of atmospheric pressure, the temperature at which any fluid usually boils is always mentioned by chemists as a very important characteristic. In the annexed table you will

observe the boiling points of several well-known fluids:—

Hydrochloric ether	52 deg.
Sulphuric ether	96 „
Sulphuret of carbon	116 „
Pyroacetic spirit	132 „
Water of ammonia	140 „
Pyronylic spirit	151 „
Alcohol	173 „
Water	212 „
Nitric acid	248 „
Oil of turpentine	315 „
Phosphorus	554 „
Sulphur	601 „
Sulphuric acid	630 „
Mereury	660 „

A correct appreciation of the operation of boiling is of great use in many of the arts. Sometimes fluids are employed for the sake of making infusions, and the boiling of such liquid is regarded as a test of their containing a certain amount of heat. Under these circumstances, such a liquid made to boil by artificial means at a diminished temperature would be totally inadequate to answer the end proposed; at other times, however, boiling is merely had recourse to as a means of evaporation, and the heat necessary to promote it under ordinary circumstances proves injurious. For example, there are certain vegetable extracts and other preparations, the active principle of which is either volatile or susceptible of injury, at temperatures necessary for the promotion of their ordinary inspissation; but by heating them in vacuo, facility of evaporation is secured without elevation of temperature.

Connected with the subject of vapour, I should notice *distillation*, one of the most important and curious operations in chemistry. The mechanical arrangements for conducting this operation are innumerable, and I should occupy your time very unprofitably, by noticing half of them; the era has long since passed for men to attach specific importance to distillation *per ascensum* or *per descensum*, or to many other trivial modifications of this operation; reference to the object is the only consideration of importance in that matter; distillation is merely a *volatization with subsequent condensation*; its rationale is very easily comprehended, and most of the expensive instruments used for distilling admit of much profitable simplification. In large distilleries, where it is of great consequence to economize heat as much as possible, the arrangement of the distilling apparatus is so managed that the tube or worm as it is called, which conveys the vapour to be cooled, is passed through another portion of fluid to be distilled, by which means it is evident that the evaporation of the latter is promoted.

The temperature of vapour or steam is in every case equal to that of the fluid from which it arises; for example, the steam or vapour from water at its ordinary boiling point is 212 deg.; if, however, water be made to boil at 180 deg., then its vapour will possess the same temperature; indeed, we ought to regard the act of boiling as a casualty, for vapour given off at 180 deg. *without boiling* is similarly circumstanced.

The temperature of steam or vapour, then, it seems, is subject to a great range of variations, but it is believed that equal weights of vapours of the same liquid contain at every possible temperature an equal quantity of heat; or, in other words, that the sum of heat, sensible and latent, never varies. For example, the vapour of water at 32 deg. is of course 32 deg. also, and the latent heat of such vapour is 1180 deg.; the two numbers added together make 1212 deg., and it seems proved that the sum indicating the latent heat of steam at any other temperature, added to the sum of the latter, is in every case 1212. The accompanying table further develops this law:—

32	the latent heat is 1180,	the sum being 1212
100	1112	1212
212	1000	1212
300	912	1212

If this theory be correct, (and there does not seem any just ground for doubting it,) nothing is gained in the way of fuel by evaporating liquids at low temperatures.

Seeing that the particular cohesive state of

matter is not an inherent quality, but is merely the resultant between the forces of cohesion and heat—heat and pressure—we may easily imagine the existence of bodies possessed of so much heat naturally as shall be more than sufficient to counterbalance any pressure, atmospheric or otherwise, to which they may be ordinarily subject. The natural state of such bodies would consequently be *vaporous*, and might be thought to be permanently so; in virtue of which assumption another designation besides vapours might be introduced for these bodies, and they might be thought subject to totally different laws. Now such was the idea, and hence we hear of the terms *vapour* and *gas* employed in contradistinction to each other; the former being defined as *elastic bodies* condensible by cold, and the latter *elastic bodies* not condensible by the same means. At one period the definition was still more incorrect, gases being denominated *permanently elastic fluids*. Now chemistry has proved that certain fluids usually thought to be permanently elastic, may be condensed by great pressure into fluids; nay, one, carbonic acid gas, is capable of being condensed by cold and pressure together into a solid; facts which warrant us in the belief that all elastic fluids might be converted at least into liquids, provided we could apply sufficient force. It appears, then, that the terms gas and vapour are merely synonymous, respectively allusive to differences of degree only, the limits of which are very ill defined. Although many, nay, the greater number of elastic fluids termed gases have never yet been condensed into a liquid state, it is clearly in accordance with analogies presented to us by chemistry to regard them as vapours of exceedingly volatile liquids.

The usual plan of condensing gases into the liquid state is exceedingly ingenious. Philosophers had long attempted to effect this end by mechanical means, but their labours were in vain; when Mr. Faraday hit upon the very simple plan of condensing certain gases by their own pressure, that is to say, having put into a tube the substance from which the gas was to be generated, and melted the other end of the tube, the gas whilst being eliminated had to oppose of itself an atmosphere continually increasing in density. The pressure thus commanded is in many cases very erroneous, only limited by the force determining the evolution of gas, and the power of the tube to withstand its pressure.

For the purpose of illustrating this general process of condensation, cyanogen is the gas usually operated upon; a little cyanide of mercury from which it is to be generated is put into a tube sufficiently strong, slightly bent and hermetically sealed at one end, the other end being drawn out to a capillary opening. A spirit lamp flame is applied to the extremity in which is the cyanide of mercury, and from time to time the capillary orifice is tested to ascertain whether it gives exit to an inflammable vapour, which is cyanogen; combustion being observed, a jet of flame is darted on the capillary opening which is closed, and thickened by heat and pressure. In this state the tube is allowed to cool, and we have obviously an instrument for preparing cyanogen at pleasure, nothing more being necessary for this purpose than the application of heat at one end of the tube and cold at the other. If this operation be continued for a few minutes, we shall observe a limpid colourless fluid gradually accumulate in the cold extremity of the tube; this is *liquid cyanogen*. I have already alluded to the solidification of carbonic acid gas by the united agency of pressure and cold; the method of performing this condensation was first devised by M. Thilorier, and is exceedingly curious. Carbonic acid is first converted into a liquid by its own pressure, and as a further step, the liquid is allowed to escape in a strong jet from a small orifice. The result is most curious; a portion of the liquid evaporates very rapidly, and in thus doing, abstracts and renders latent an enormous amount of heat; this being taken from the fluid, reduces it to the solid form. By reference to the accompanying table, you will see what gases Mr. Faraday succeeded in liquefying, at certain amounts of pressures and temperatures:—

	Pressure in Atmospheres	Fah.
Sulphurous acid	2	at 45 deg.
Chlorine	4	60 „
Cyanogen	4	60 „
Ammonia	6.5	50 „
Sulphuretted hydrogen	17	50 „
Carbonic acid	36	32 „
Muriatic acid	40	50 „
Nitrous oxide	50	45 „

The temperature of vapour exactly equals that of the fluid from which it arises, although it contains an enormous quantity of heat in a latent or insensible form—a fact not suspected until the period of Dr. Black's investigations relative to the subject of latent heat. This philosopher calculated that the latent heat of steam, as it arises from water boiling at 212 deg., is 810 deg.; i. e., that the amount of temperature absolutely necessary to the very existence of steam at 212 deg. would have raised the temperature of water at 212 to 810 deg. above the boiling point, or to 1022 deg. Dr. Ure estimates the latent heat of steam still higher, making it 1000 deg. He also gives the accompanying table of the latent heat of some other vapours:—

Vapour of alcohol	457 deg.
ether	312 „
oil of turpentine	184 „
nitric acid	550 „
liquid ammonia	866 „
vinegar	903 „

Of course the precise quantity of heat rendered latent during the conversion of water into steam becomes evident, or is given out, when the conditions are reversed. Hence it is that steam becomes so economical and convenient an agent in heating baths, brewers' mash-tubs, &c. Suppose, for example, that 100 gallons of water at 50 deg. be mixed with one gallon at 212 deg., the temperature of the whole will be raised by about 1.5; but if a gallon of water be condensed from the state of steam in a tub containing 100 gallons of water, the water will in that case be raised 11 deg. It appears, therefore, that a gallon of water condensed from steam raises the temperature of 100 gallons of cold water to nine and a half degrees more than the addition of a gallon of boiling water.

It was formerly supposed that the atmosphere or some gas was necessary to respiration, but the idea is incorrect. Dalton first proved that different gases and vapours offer no resistance to each other's elasticity; for instance, if we throw into a bottle previously filled with atmospheric air a little alcohol, the latter will expand into vapour, which pervades the bottle to the same extent as if no atmospheric air had been originally present.

PATHOLOGY.

II. THE CHEMICAL SCHOOL OF PATHOLOGY.

—We have seen that the Dogmatists founded their theories upon the supposition, that the matter composing the living body was in no respects distinguished from the matter composing the rest of the universe, except inasmuch as it was modified under the control of an intelligent, immaterial principle, to which they gave various names, according to their peculiar fantasies. We have now to speak of other sects of pathologists, who discarded altogether every notion of a spiritual, immaterial intelligence, and limited their inquiries to the sole consideration of the organic composition of the body. Among the various opinions emanating from the belief of pure materialism, the doctrine of chemical organization holds a very prominent place in the empire of medicine. Aesclepiades may be considered the founder of this hypothesis. He declared that the Hippocratic practice of medicine was nothing better than a solemn contemplation of death. *The empyreal physis, the pneuma, the soul*, and all such hypothetical existences he looked upon as mere hallucinations, without the slightest evidence of reason or common sense to support them. He considered that the living body, like all other bodies, was composed of an infinite number of corpuscular atoms, held together by a peculiar force of physical

cohesion, and that life and health consisted in the relation which these corpuseles bore to one another, and to the interstitial spaces left between them. Disease arose from the disturbance of this relation, and the intensity of the disease varied according to the degree of the disturbance. The doctrine of Asclepiades, however, was not in harmony with the prevailing dogmas of the times, and consequently it fell into oblivion during many centuries, till it was revived in more modern times by Paracelsus and Van Helmont, who laid the true basis of chemical pathology. These pathologists belonged in an eminent degree to the order of Alchemists, and their invention of the *Archeus* seems to have sprung from the mystical taste of the age. They were followed by Silvius de la Boe, who was the first to construct a complete chemical system of physiology, pathology, and therapeutics. He deduced all the animal functions from fermentations, and was the first to speak of acrimonies in the explanation of diseases, all the varieties of which proceeded from acrimonious *acid* or *alkaline* fermentations, and from effervescence of the bile. His doctrine was embraced by Willis, who incorporated with it the salt, sulphur, and mercury of Paracelsus, but was in agreat measure overthrown by Piteairn, Boerhaave, Sydenham, Hoffmann, &c. Again, however, it has risen under a different shape, in consequence of the advancement of chemistry, and the discoveries made concerning caloric, light, electricity, and magnetism, and health and disease are said to be determined by chemical affinities, compositions and decompositions, by the normal or abnormal development of caloric, by the force of electricity, the direction of magnetic currents, &c. Under this latter form it was cultivated, first, by Baume, and afterwards by Girtanner, Humboldt, Rollo, Beddoes, &c. The chemical theory made no account of the organic laws of life, that is, it admitted no other phenomena in the universe besides those resulting from physical and chemical action. We have seen that the dogmatic pathologists derived their spiritual dogmas from the metaphysical absurdities of some prevailing school of philosophy; in like manner the chemical pathologists have merely followed in the wake of natural philosophers. Asclepiades derived his chemical notion from the corpuscular philosophy of the Eleatic school, which had been perfected by Heraclides and Epicurus; Silvius founded his theory upon the Cartesian æther and the extravagances of alchemy, which were then so much in vogue; and the chemical pathologists of later times have formed their hypothesis of life, health, and disease, from the experiments of Lavoisier, Priestley, Black, Franklyn, and others. Hence they explain the function of respiration as a mere process of oxygenation, the transmission and effect of nervous energy as a mere electrical phenomenon, &c. I presume, however, the purely chemical school has no existence in the present day.

III. THE MECHANICAL SCHOOL OF PATHOLOGY.—We find no prominent traces of this school in ancient medicine. It owes its origin to the vast extension of mathematical knowledge which occurred in the 17th century. As it was the most modern in date, so it was of all others the shortest in duration, though, perhaps, it has been surpassed by none in éclat and splendour. Borelli was the first to construct a system of pathology from the mechanical laws of bodies. He was followed by George Baglivi, who applied to the living frame the various theorems of physical dynamics and hydraulics. He compared the different organs of the body to certain mechanical apparatus; the lungs, for instance, he compared to a pair of bellows, the heart and sanguineous vessels to a forcing-pump, with its accompaniments of hydraulic tubes, the bones to levers, and the muscles to powers applied to these levers, &c. From these comparisons, and certain data derived from experiment, he formed a system of animal dynamics by which he attempted to explain the various organic functions, and attributed the cause of all diseases to some physical impediment in the regular working of the living machine. This was Baglivi's theory, but I shall afterwards show that his practice belonged to another school of medicine. In the meantime, I may observe, that while Borelli calculated the phenomena of vital motions simply

as they appeared to him, without attempting to assign the primary source of these phenomena, Boglini discovered a very important link in the chain of causation, by showing that all organic motion proceeds from a power of contraction and relaxation inherent in the muscular fibre, and thus he was the first to lay the foundation of vital solidism. Borelli was like an astronomer who traces the revolutions of the heavenly bodies by mere observation, while Baglivi was like Sir Isaac Newton, who discovered that the motions of all these bodies are governed by a law of universal attraction. The mechanical doctrine was partly embraced by Mead, Hoffmann, Boerhaave, &c., more especially, perhaps, by the first of these great pathologists, for Hoffmann was in reality the founder of the *vital*, and Boerhaave the most distinguished ornament of the *eclectic* school of pathology. Bernoulli wrote a very ingenious treatise, *De motu Musculorum*, and James Keill attempted to apply logarithms and the fluxional calculus to organic motion. It was soon found, however, that all such calculations must necessarily be false and defective, since a most important element was neglected in the analysis. The living organism was looked upon as a mere physical machine, and its actions were accordingly deduced and measured by the ordinary theorems of mechanics. The result was, of course, erroneous, since the functions of the living organism are regulated by transcendental laws which are altogether different from those which act upon inorganic matter. The consequence was that the iatro-mathematic school, after a brief reign of glorious ascendancy, was destined to sink into nullity, and is now remembered only as a bright apparition of genius that once sat upon the throne of science. It originated, as I have said already, in the general prevalence and successful pursuit of mathematical studies during the age of Newton, Leibnitz, Bernoulli, &c., and like the glory of Thebes under Pelopidas and Epaminondas, it rose up and flourished in the lifetime, and very rapidly decayed after the death of its illustrious founders.

CAMBRENSIS.

EVILS AFFLICTING THE MEDICAL PROFESSION.

To the Editor of the 'Medical Times.'

SIR—Before quitting the subject, there are a few evils still unmentioned that call for some notice. These I will now glance at.

The existing state of our medical schools, and the facility with which these institutions can be established by a few private individuals, is greatly to be lamented. They are now made mere stepping stones to practice, and their ostensible object, teaching, is but a secondary consideration with the men connected with them. Every newly dubbed M.D., however young, at once aspires to the lecturer's chair, and with due dignity assumes the privilege of instructor. Let any one observe the advertisements issued by many of the minor schools in the metropolis, and mark who are the lecturers on medical jurisprudence, botany, materia medica, &c. I could mark out many who are professed lecturers, that a year or two since had not emerged from studentship. Yet these very men have the assurance to stick themselves up as professors, and engage to instruct others in sciences of which they themselves scarcely know the rudiments. Thus is the high and honourable office of medical lecturer debased and caricatured. Students, instead of listening to men whose presence should be as bright examples, and stimulate them on to follow a like career, are doomed to imbibe the prosy lucubrations of some insipient self-satisfied, empty-brained boy.

The imperfect and hurried way in which schools are frequently got up previous to the commencement of a winter session is disgraceful. A flaming, handsomely printed prospectus is sent forth, detailing the numberless advantages to be derived by pupils, and the facilities offered for gaining knowledge; the museum, library, dissecting-room, &c., &c., being open at certain hours. Some inconsiderate, unwary youths, do enter the so-called classes, and when too late have to regret their

rashness. A subject is never to be seen in the dissecting-room, and the library consists of a few odd medical pamphlets and antediluvian volumes.

So long as the present regulations remain, I would beg to call the attention of the worshipful company to the facility with which many men gain admittance into the profession, through the medium of false indentures. This is a great injustice towards those who have expended large sums and much time in qualifying themselves properly. To remedy this, I would suggest, that at the time the indenture is signed, the company should receive notice of the same from the practitioner, and that the pupil and master's name be entered together in a book, kept for that purpose at the Hall, so that the indenture, when presented, previons to the student's examination, must correspond with the data in their book.

The subjects thus hastily touched on, might have demanded, so far as their importance is concerned, much more lengthened remarks, but I have been fearful of exhausting the patience of your readers. Medical reform is undoubtedly a difficult matter to legislate on, but the above are a few among the numberless evils that seriously require attention.

Accept my thanks for your kind indulgence, in thus permitting me to lay my opinions before the profession, and believe me to remain, Sir, your obedient and obliged servant,

A GENERAL PRACTITIONER.

May 16th, 1842.

SPONTANEOUS GENERATION.

(By Dr. WATSON, in the Medical Gazette.)

IT was the opinion of Linnæus, and of other natural philosophers of his time, that the *intestinal* worms were really terrestrial or aquatic animals which had been accidentally swallowed, either while young and small, or in the antecedent state of ova. It was even pretended that these animals had been recognised and detected out of the body, in stagnant waters. But later inquirers, especially Bremser and Rudolphi, have completely disproved this notion. After dedicating twelve years of his life to the observation and study of entozoa, Bremser was satisfied that no creatures identical in structure with the intestinal worms are ever met with out of the body, except such as have come from the intestines of man, or of some other animal; and conversely, that no terrestrial or aquatic worms are ever found living within the bodies of men or of animals, unless they have been directly and plainly received from without.

But, then, is it not possible that, as Boerhaave supposed, aquatic or terrestrial reptiles, casually entering the body from without, being placed under entirely new and unnatural conditions, may have attained a monstrous growth, and undergone metamorphoses such as we know that some of the lower animals, by change of circumstance, do undergo—as the tadpole becomes a frog, the maggot a butterfly?

To the reception of this theory there are strong grounds of objection. First, there is no ascertained relation (as in the other cases) between the structure of intestinal worms, and of animals having an independent existence out of the body; and they are never caught (as they would surely sometimes be) in the transition state—the intermediate condition. Secondly, opposed to this "accidental" hypothesis are also the facts that certain species of worms infest certain species of animals only; that in the same animal different species of worms occupy (as we have seen) special parts of the alimentary canal—have each their peculiar habitat; that worms and animals of external origin mostly die as soon as they are received into the digestive organs, while the true intestinal worms perish whenever they are delivered therefrom. Thirdly, the circumstances that these worms not only live but breed within the human bowels, and that they are met with even in the

intestines of the unborn foetus, are very adverse to this theory of an accidental *error loci*.

But, to give up the notion of a metamorphosis, may not intestinal worms spring from specific germs or ova introduced from without, not casually, but in accordance with a natural law—germs or ova which find in the interior of living bodies the only conditions that admit of their development, the only soil in which they are capable of germinating, the only nest in which they can be hatched? I confess that such is my own belief. We have something like this at least in that common affection of horses called the “bots.” A species of æstrus or gadfly deposits its eggs upon the animal’s hide, where they cause, I presume, some irritation, which induces the horse to lick that part with his tongue. The eggs are thus conveyed into the mouth, whence they reach the stomach. There they are converted into larvæ, and affix themselves to the parietes of the stomach. At length, when they are ready to undergo their final metamorphosis, they are detached from the interior of the stomach, pass along with the food and feces through the intestines, and are ejected from the rectum with the dung.

Why, it is asked, may not similar phenomena take place in the human body? There can be no doubt that we every day swallow, inadvertently, numerous ova, of various kinds. It is supposable enough that sometimes the digestive organs may, and sometimes they may not, have the power of decomposing or expelling these ova.

It is quite certain that what are generally called *spurious* worms may have that mode of origin in the body. Thus, Dr. Elliotson states that he had once a patient, an infant, who discharged from the bowels a dozen live larvæ, or maggots, of the common fly. The child had eaten part of a *high* pheasant some months before. This circumstance was instructive in that case. The infant had been suffering under a chronic cough, but as soon as those larvæ were got rid of, the cough ceased. Dr. Elliotson says that he saw them in the napkin, moving about in the fecal matter, just as they might have done if they had never been in the child’s body. The same physician tells us that he has twice known, in two different patients of his, a living caterpillar to be discharged from the intestines. One of the patients was a woman who had been in the habit of eating cabbage stalks while she was washing them for the pot. The moth lays its eggs on cabbages, and she no doubt had swallowed some of them, and one had hatched within her. In the ninth volume of Dr. Duncan’s *Medical Commentaries* is a precisely similar case. A boy, after a dose or two of calomel and jalap, discharged from the rectum very many caterpillars, all alive, and full of activity. He had been in the habit, when in the garden, of eating young cabbage leaves. Till this habit began he had enjoyed good health. While the animals were within his bowels he suffered severely; had locked jaw, and fell into a state resembling coma. Upon their expulsion he recovered perfectly. Centipedes have in like manner been vomited, and voided from the bowels. But the most wonderful instance of this kind that ever was heard of, is related by Dr. Pickells in the *Transactions of the King and Queen’s College of Physicians in Ireland*. A young woman, of melancholic disposition and chlorotic appearance, had been in the daily habit, from some superstitious motive, of drinking water mixed with clay taken from the graves of two priests who lived and died in the odour of sanctity. In this way she probably imbibed the ova of the insects which subsequently issued from her body. In about three years and a quarter, she discharged, partly by vomit-

ing, but chiefly *per anum*, upwards of 2000 beetles, and their larvæ, most of them alive. Dr. Pickells counted more than 1300. Larvæ and pupæ, and perfect insects, all came forth simultaneously. Some of them ran off, as soon as they were vomited, into holes in the floor; and two large-winged insects were so lively and vigorous, as immediately to fly away. These strange births were preceded and attended by a complicated and distressing train of symptoms—a gnawing, and sense of something creeping at the pit of the stomach, vomiting of blood, amenorrhœa, hysterical convulsions, headache, retention of urine, and sometimes a degree of mental derangement. She was at length freed from this disgusting malady by large doses of the oil of turpentine.

These spurious worms differ from the true intestinal parasites in this—that the human alimentary canal is not their only, but their accidental and unusual nidus. Nevertheless, their occasional presence, alive, in that place, adds to the probability that some of the entozoa may be originally ectozoa.

The main difficulty, however, respects those animals which occupy shut cavities within us, or are imbedded in our solid organs; and this difficulty forms one avowed ground of the theory of *equivocal generation*; which means the spontaneous production of living creatures, independently of any germ, or egg, or parent. The vulgar suppose that dirt engenders fleas, that maggots result from the putrefaction of flesh, that eels arise, of themselves, in and out of mud. In other words, they infer the spontaneous origin of those creatures, of which they cannot or do not trace the procreation by pre-existing parents; and philosophers and men of science have done the same. They will not believe that which they cannot see. Now this doctrine of equivocal generation shocks, I confess, my mind, and offends my reason. If well founded, it strikes at the root of that great argument of Natural Theology, which deduces the existence of a First Intelligent Cause, from the marks of adaptation, design, and contrivance, so manifest throughout the visible universe. Observe the demand which this doctrine makes upon our faith. In defiance of all experience and analogy in respect to creatures which our finite senses are competent to examine, it calls upon us to believe that living beings of complex and intricate, yet definite and harmonious structure; provided with a digestive apparatus, with instruments of locomotion, with generative organs; of various species; in many instances of separate yet answering sexes; that not one or two of these beings, nor a pair or two, but beings and pairs innumerable, are daily formed by the blind concourse of “organic molecules.” The obscurity that hangs over the origin of the entozoa is not indeed the only, nor I think the chief ground upon which the notion of spontaneous generation rests. You are probably aware that minute animalecules, so minute that most of them cannot be seen without a microscope, soon become abundant in water wherein vegetable or animal matters have been dissolved by infusion. Such animalecules are therefore called Infusoria. How do they come there? There are two suppositions open to us. One is, that they are formed by the fortuitous union of organic atoms contained in the infusion. The other is, that they proceed from ova or germs existing in the liquid, or floating always in the atmosphere, and ready to quicken whenever they light upon their proper element. That the ova of animals which are themselves visible only by the aid of a microscope, should be absolutely invisible by us, is not surprising. We may conclude that the latter supposition is the most true, if we can show that when these ova or germs are excluded, all the other conditions

of the production of infusoria being present, no animalecules appear. Now Spallanzani long ago found, by careful trials, that no animalecules were discoverable when the access of air to the infusion was completely prevented. But it has been objected to his experiments, that the presence of atmospheric air may be one of the essential conditions upon which the requisite combination of the organic molecules depends. Air, solar light and heat, and organic matters in solution being given—does animal (or even vegetable) life ever result? That is the question. The experimentum crucis has been made, and has answered “no,” as I have lately learned from one of Professor Owen’s admirable introductory lectures; by whom I am glad to find this uncomfortable doctrine of equivocal generation is strongly discountenanced. The experiment to which I refer was conducted by M. Schulze, of Berlin. I will read you his own account of it, as I find it recorded in the *Edinburgh New Philosophical Journal*.

“The difficulty to be overcome consisted in the necessity of being assured, first, that at the beginning of the experiment there was no animal or germ capable of development in the infusion; and secondly, that the admitted air contained nothing of the kind. For this purpose I filled a glass flask half full of distilled water, in which I mixed various animal and vegetable substances; I then closed it with a good cork, through which I passed two glass tubes bent at right angles, the whole being airtight. It was next placed in a sand-bath, and heated until the water boiled violently, and thus all parts had reached a temperature of 212°. While the watery vapour was escaping by the glass tubes, I fastened at each end an apparatus which chemists employ for collecting carbonic acid; that to the left was filled with concentrated sulphuric acid, and the other with a solution of potash. By means of the boiling heat, every thing living, and all germs in the flask or in the tubes, were destroyed; and all access was cut off by the sulphuric acid on the one side, and by the potash on the other. I placed this easily moved apparatus before my window, where it was exposed to the action of light, and also (as I performed my experiment during the summer) to that of heat. At the same time I placed near it an open vessel, with the same substances that had been introduced into the flask, and also after having subjected them to a boiling temperature. In order now to renew constantly the air within the flask, I sucked with my mouth, several times a day, the open end of the apparatus filled with solution of potash; by which process the air entered my mouth from the flask through the caustic liquid, and the atmospheric air from without entered the flask through the sulphuric acid. The air was of course not at all altered in its composition by passing through the sulphuric acid in the flask, but if sufficient time was allowed for the passage, all the portions of living matter, or of matter capable of becoming animated, were taken up by the sulphuric acid and destroyed. From the 28th of May till the beginning of August, I continued uninterruptedly the renewal of the air in the flask, without being able, by the aid of the microscope, to perceive any living animal or vegetable substance, although during the whole of the time I made my observations almost daily on the edge of the liquid; and when at last I separated the different parts of the apparatus, I could not find in the whole liquid the slightest trace of infusoria, of confervæ, or of mould. But all three presented themselves in great abundance a few days after I had left the flask standing open. The vessel which I placed near the apparatus contained, on the following day, vibriones and monads, to which were soon added

larger polygastric infusoria, and afterwards otatoriae."

This experiment confirms [the belief which various other facts had suggested—that the different kinds of entozoa are not parentless animals, and that they somehow find their way into the body they inhabit from without. The lowest of the infusoria are of fixed and determinate species; and Ehrenberg states that even the minutest monads possess a complicated organization. It may be asked, concerning both them and the entozoa, why, if they ever arise spontaneously, should they be furnished with a generative apparatus? Again, some of the entozoa abound in certain places, and strangers coming to those places appear to contract them there. The dracunculus was thought by the soldiers in India to be communicable from person to person, as the itch insect, and the chigoe, to both of which it has some analogy, certainly are. The infant filaria probably creeps in through the skin without causing any noticeable pain. Even that monster among the entozoa, the tape-worm, invades the bodies of those persons who visit the countries to which it belongs. I told you before that, when tape-worm occurs in Germany, it is almost always the *tænia solium*; when in Switzerland, almost always the *tænia lata*. Now the celebrated Soëmmering was afflicted by one of these beasts; and he was by birth a German; yet the worm that he voided was of the foreign species, the *tænia lata*. He had resided, however, for some time in Switzerland; and there, we can scarcely doubt, he caught the ovum, or the young one, of the parasitic animal. Mr. Abernethy once told me the following curious story:—A shepherd had to drive a flock of healthy sheep to a distant part of the country. The journey occupied two or three days. On the road one of the animals broke its leg, and was carried the rest of the way on horseback. All the flock, except this hurt individual, was turned for one night into a marshy pasture. The broken limb was set, and the patient got well, and was the only one of the whole flock that did not subsequently become affected with the rot, the only one that escaped having flukes in its liver. Is it not presumeable that the ova of these parasites were swallowed with the herbage cropped by the sheep in the damp meadow? The germs of entozoa, which dwell in closed chambers, and within the solid viscera of the body, are probably carried thither by the blood.

Upon the whole, we may reject the hypothesis of equivocal generation, and fall back upon the Harveian axiom, taken in its most extended sense of *omne vivum ex ovo*. If I have digressed somewhat in order to set before you the grounds of my own belief in this matter, the interest and importance of the subject must be my excuse.

ROYAL COLLEGE OF SURGEONS, LONDON.

List of gentlemen admitted members, on Friday, May 20th, 1842:—

Edward Nevesison, John Southern, James Douglas, William Grant Eaststaff, Nathaniel Montefiore, Michael Hare, Charles Gibson, Arthur Browne Steele, Henry Thomas Berry, Edward Pye, Peter Brotherston, Arthur Taylor, Charles Robison, James Rowlands.

Admitted Monday, May 23rd, 1842:—

Octavian Royle, Charles Price Symonds, Alfred George Field, William Malichi Burke, Major Ainger, John Jeffes Sparham, James Green, Alfred Anderson, Henry Unwins, Francis Bryant Pearce, James Thomson Waller, George Augustus Shelton, John Ward, Edward Allen.

ON THE EXHIBITION OF INSPISSATED OX-GALL IN VARIOUS DISEASES.

By CHARLES CLAY, Member of the Royal College of Physicians, London, &c., &c., Lecturer on Medical Jurisprudence, &c., Manchester.

[For the 'Medical Times'.]

THE value of opium as a remedy in disease is acknowledged by all practitioners, and it would be much more generally given if it were not for the constipation resulting from its application, by the general check it is supposed to give to the operation of the secreting organs. How this is accomplished is not so easily explained; physiologists admitting, that though digestion may progress during sleep, secretion is but very slowly carried on. The action of opium, then, may not be direct on the secretory organs, but by producing artificial sleep, *through that sleep* produce the check to the secretions, generally attributed to the direct effect of the opium itself.

Perspiration, however, may be adduced as a contradiction to this, but it may with equal propriety (as it has been frequently) be denied that perspiration *is a secretion*; this (perhaps properly called) exudation being most certainly and frequently produced by sleep, it also follows that the perspiration attributed to various preparations of opium, "*pnlv. Doveri, &c.*," may not be the direct effect of the preparation used, but the consequence of the sleep produced by it. Dr. Holland, in his "*Notes and Reflections*," observes, "the fear of confining the bowels, and checking the secretions, constantly present to the mind of the practitioner, prevents the adequate use of a medicine, having the power of mitigating pain, relieving spasm, procuring sleep, and producing perspiration, &c."

In whatever view the action of opium is considered, it must be acknowledged that if its action *can* be secured without the disadvantages generally attributed to it, its value as a remedial agent must be very considerably increased, and the frequent objection to its use be done away with. That such *can* be *positively* accomplished by the combination of ox-gall with it, the cases here given fully prove. And, supposing the secretion of bile in the system to be deficient in quality, or quantity, originating disease from whatever cause, there cannot remain a doubt but that an artificial supply of bile must be attended with the best possible results; that *substitute* acting in the full capacity of the original secretion, until such secretion be either amended or restored. Ancient pathologists, particularly of the Hippocratic school, attributed considerable importance to bile; and perhaps moderns have too much neglected the results arising from its redundancy or deficiency in the animal system. What I have hitherto advanced has been chiefly to illustrate the deficiency of bile in the alimentary canal; but before I conclude this subject, it may be necessary to observe very briefly, that diseases not unfrequently arise from the bilious secretion being too great in quantity, and what necessarily follows, depreciated in quality; hence those obstinate and long-continued diarrhoeas, and cases of jaundice, *accompanied with purging*, (*which are very distinct* from the common run of cases of jaundice) being the consequence of mechanical obstruction in the biliary ducts, always accompanied with constipation, little or no bile passing along the alimentary canal. But I have frequently observed cases of jaundice, and more in infancy than adult ages, where no such obstruction existed, and where motions evidently indicated a full sufficiency of bilious secretion. Jaundice arising from obstruction in the biliary ducts *may*, after the mechanical obstruction has been removed by emetics, &c., be much benefited by the exhibition of gall internally, which

not only assists the bowels in passing off the excrementitious mass, but improves the secretion of bile so as to prevent the formation of gall-stones in future. But those cases accompanied with lax motions, as well as long standing cases of obstinate diarrhoea, would rather be injured than benefited by it. The only resource in such is to lessen the bilious secretion, and I know of no one object more efficient in checking that secretion, and exciting perspiration, than small and frequent doses of crude opium, with warm clothing. If once the exudation by the skin becomes apparent, in such cases it may very certainly be predicated that the secretion of bile is lessened, and the case progressing towards a cure. I am convinced there exists a remarkable sympathy between the secretion of the liver and the exudation by the skin, either of which being lessened increases the other, and vice versa.

The case of diarrhoea reported by Dr. Clendinning in the '*Medical Times*' since the first part of these observations were written, I should rather attribute to a too free secretion of vitiated bile, than to the locality in which it occurred; and the warm clothing he so judiciously advised, by promoting perspiration, lessened the bilious secretion, and so checked the diarrhoea. I have witnessed many similar cases with similar results. I think there is much reason for supposing that the bilious vomitings, motions, &c., as observed in Asiatic cholera, are in consequence of a too redundant secretion of vitiated bile, further confirmed by the sympathetic state of the skin, dry, cold, and shrivelled; in such cases inspissated gall offers itself with every probability of improving the condition of the system when combined with opium. I only speak on supposition, as I have not had an opportunity of testing its powers in that dreadful scourge. Another remarkable disease falls within the range of supposition—viz., diabetes, now pretty generally allowed to be, in the first stage, an attack of the stomach, proved by the acidities, constipation, &c., present; here again is perceived the strong connection between the organs of digestion and the skin, being almost, if not perfectly, free from exudation. These symptoms are so strictly analogous to those in which inspissated gall has been so decidedly effective, that I would not hesitate to anticipate great advantage from it, if not a direct cure. I do not wish to be misunderstood. I do not mean this to apply to the secondary stage of diabetes, where the urinary organs are so extensively deranged; when that occurs, I have had great success in the exhibition of the tinct. ferri. sesquichloridi (see cases reported in *Lancet*, vol. i., 1840-1, p. 84). I have not, however, had any cases of diabetes since I began to apply the inspissated gall to practice to test its merits upon, but I think it capable of correcting the evil, and certainly worth trial, since so little satisfaction has been derived from any means hitherto suggested, any new plan is justifiable.

QUICK WORK.—A candidate at the present Parisian concours had to give his plan of treatment for a patient labouring under fibrous closure of the anus, under M. Breschet. The president of the concours, M. Breschet, fond of operations, did not approve of the palliatory treatment recommended by the candidate, and anxious to teach him a lesson, operated on the patient the following morning; in the evening much to his discomfiture, the patient died.

HOMŒOPATHY.—There has been an insurrection at the College at Montpellier against a homœopathic lecturer, M. D'Amador, who escaped with a drubbing from the students, administered to him in anything but in an infinitesimal dose.

EXTRACTS FROM FOREIGN JOURNALS.

[For the Medical Times.]

BELGIAN.

Scorbutic Cachexia simulating Cyanosis.
By Dr. Soly.—Adolphe Lepage, fourteen years of age, born of delicate parents, was reared by hand, at Paris, but enjoyed tolerable health till eight years old, excepting occasional attacks of diarrhoea, and incontinence of urine, to which he was subject. He seemed of an indolent character, and exhibited a degree of apathy quite foreign to his age. When ten years old, he was living with his parents in Holland, and before entering school, was obliged to be vaccinated. He had always a disordered and voracious appetite, which he satisfied by all kinds of unwholesome and indigestible food, and thus maintained the diarrhoea. A short time afterwards a swelling arose on the right side of the face, the gums being tumefied and painful, some of the teeth decayed, and an abscess soon formed in the cheek, which eventually opened; this abscess, of a bluish appearance, was a long time cicatrizing (at least three months). The colour afterwards changed to yellow, and then to a violet-blue, which spread successively over the cheeks, lips, and inside of the mouth, the aspect became gloomy, the face puffed up, and the skin dry; the diarrhoea continued, there were frequent headaches, and violent palpitations of the heart; he had occasional attacks of faintness and vertigo. When brought to me, he was thirteen years of age; the face was bloated and livid, the cheeks, lips, and the whole inside of the mouth of a violet-blue colour, the eyes dull and watery, respiration embarrassed, pulse soft and feeble, the tongue bluish, but large and moist; on auscultation a very manifest *bruit de souffle* was heard in the heart, and the respiratory bruit, although feeble, could be distinguished over the whole surface of the lungs. The digestive functions were bad, the diarrhoea reappeared from time to time; he had frequent attacks of vertigo and fainting; the palpitations of the heart were of repeated occurrence, as well as the pain in the head; no kind of eruption was perceptible upon the body. His sleep (according to his father) was always of a profound character, greatly resembling lethargy. His respiration was disturbed and irregular; the face of a deep blue colour, and the rest of the body of a livid or leaden tint. A physician to whom he at first applied, (and to whom the child complained of a little pain in the epigastrium) believed him to be labouring under gastritis, and ordered him to be dieted, with the application of leeches to this region; the blood which came away was black and thick, but the condition of the patient was far from improved. There was considerable obscurity in this case, as the symptoms under which the boy laboured might be produced either by scurvy or by cyanosis; both of these affections, generally speaking, ultimately induce a peculiar colouration of the cutaneous tissue, a constriction in the respiration, palpitations of the heart, with *bruit de souffle*, &c. I was inclined, however, for the following reasons, to believe this to be a case of scorbutic cachexia: the disease in this youth was only of two years date, whereas cyanosis is ordinarily congenital, resulting from a vice of conformation of the heart, with an abnormal communication between its right and left cavities; or else, from the foramen ovale remaining open; either of which cases would be followed by the admixture of the venous with the arterial blood; and hence results that remarkable blue colouration of the dermic tissues, as well as the disturbance of the respiratory organs. But in cyanosis it is most probable that the symp-

toms would have been apparent from the birth. Might we not then more justly attribute the condition of this youth primarily to a constitutional predisposition, but which was eventually called into action by the climate of Holland, as well as the bad nourishment and the privations to which he was subjected? Impressed with this idea, I placed the boy on a tonic and restorative diet; the digestive powers were soon restored under more substantial food, and after the employment of a few bitters, the stomach was able to bear some ferruginous preparations, as the tincture of tartarized iron; a little wine, and exercise in the open air, formed also an essential part of the treatment. Considerable improvement was soon manifested, the diarrhoea became checked, and the stools dark and solid. I persisted with the employment of the ferruginous preparations which were most likely to furnish the blood with those principles of which it was deprived. I therefore ordered the following:—

R. Ferri iodid. ʒij.

Tinct. gent. comp. ʒij.

Vin. Madeir. Oiss.

A small wine glassful to be taken night and morning; animal food for diet, beer with bitter tonics macerated in it, exercise in the open air, flannel clothing, and dry frictions over the body. In twenty days from the employment of these means, a remarkable change was perceptible; the respiration was more easy, the palpitations and *bruit de souffle* considerably lessened, the complexion clearer, eyes brighter, appetite and digestion good; in a word, the amelioration was general. After continuing these remedies for two or three months, a perfect cure was established.

Remarks.—The most remarkable point about this case, is the degree of intensity manifested by the disease. In considering some of the symptoms, as the *bruit de souffle*, frequent faintings, headaches, &c., we must readily perceive that the affection of the heart was but secondary and dependent on the morbid diathesis of the patient; and that the latter being corrected, all the other derangements in the functions of the body disappeared along with it. We should, however, be more inclined to regard the diathesis in this case as of a *scrofulous* than a *scorbutic* nature. For we find in this boy, that the disease had existed some years, and made but very slow progress; the teeth and gums were affected on one side only; the appetite was irregular, and the diarrhoea almost constant; the abscess which formed in the right cheek was slow to cicatrize, and a blueish tint was left for some time after, thus forming a group of symptoms entirely characteristic of scrofula; whereas in scurvy, the lassitude, the pains in the joints, the universal swelling of the gums, the mental imbecility, the great putridity of the humours, even during life, and the much greater intensity of all its symptoms, make it an essentially distinct disease. The progress of scurvy is also very different; it is quickly developed, and carries off the patient in a few days after attains its greatest intensity, or, if checked in its progress, convalescence is a very long time taking place.

Acute pericarditis, death, post-mortem examination. *By Dr. Bulckens.*—Demartelaere, a soldier, 31 years of age, dark hair, pale face, and of a constitution originally good but undermined by frequent attacks of ague, after being exposed to cold, perceived a degree of febrile re-action, followed by lancinating pain under the right arm-pit, and dyspnoea. These symptoms had progressed for four days, when he was carried to the military hospital of Anvers on the evening of the 8th of November, 1839. When I saw him on the morning of the 9th, he was lying on his back, his face flushed, there

was dyspnoea, acute pain under the right shoulder, increased on pressure and the movements of respiration, moderate cough, expectoration of frothy sputa, resonance of the voice, and vesicular respiration over the whole extent of the chest; pulsations at the heart and wrist regular, strong, and frequent; tongue dry, thirst considerable; constipation of the bowels; skin hot but moist. (Bled to 14 ounces.—Laxatives.—Low diet.—Emollient drinks.) The bleeding was repeated at night. The coagulum was each time cupped and very much buffed; the serosity thick.) 10th. The symptoms continued much the same; but the pain in the side was less acute; the bowels had acted. The patient was again bled, both morning and evening.—Same appearance of the blood as the day before. 11th. Considerable oppression, great pain over the forehead, anxiety, slight and unsettled pain in the chest, but which is neither increased by pressure nor on respiration; scarcely any cough or expectoration; slight sonorousness of the right lung with considerable dulness over the precordial region; respiration difficult, but unattended by any rale; pulsations of the heart irregular, frequent, and feeble; pulse resistant, but presenting the same irregularity as the heart. (To be cupped over the cardiac region; blisters to the thighs; low diet.) 12th. Delirium during the night; countenance greatly altered; the dulness extended over a larger surface, pulsations of the heart still irregular, *bruit de souffle*; pulse compressible and intermittent; the other symptoms continue the same. (16 leeches to the region of the heart; the bleeding to be kept up for some hours.) 13th. Continued delirium, jaetilation, extreme anxiety, dyspnoea increased; face sharp and livid, speech difficult; dulness from the level of the second rib to below the sternum, and extending from the left to the right bosom; irregularity and obscurity in the pulsations of the heart, and very manifest *bruit de souffle*; respiration difficult, bronchial on the right side, normal on the left; no cough nor expectoration; pulse irregular and easily compressible. (A large blister to be applied at night over the same part.) The next day the symptoms were augmented; the oppression increased, the delirium continued, some convulsive movements of the limbs took place, and after an agony of some hours, the patient sunk during the night of the 16th.

Autopsy made fifteen hours after death. Cranium.—The brain and its membranes presented no alteration. Chest.—Strong adhesions had formed between the pleura and pericardium. The covering of the heart, greatly distended, occupied a large part of the thoracic cavity, and particularly the entire left side; on opening the fibrous bag, more than half a pint of thick serum escaped, in which were floating some purulent flakes; the pericardium itself was thickened, and covered with false membranes; the serous coat lining the inner surface of the pericardium, and reflected over the heart and large vessels, was red, and covered throughout by a false membrane, presenting numerous miliary projections of a red colour and nipple-like appearance, exactly similar to those which Corvisart and Laënnec have described as peculiar to inflammation of the pericardium. The heart, larger than natural, floated in the midst of the serum contained in its fibrous bag; its muscular tissue was softened and pale, the parietes of the left ventricle somewhat hypertrophied, the cavities of the heart containing fibrous clots of a whitish colour. A small quantity of purulent serosity was found in the pleural cavities; the diaphragmatic pleura as well as that of the right lung was covered by very thick layers of false membrane laid one upon the other. This disorganization extended over the whole right side of the tho-

racic cavity. The right lung was in a state of red hepatization, very pliable, and presenting already some points of suppuration. The left pleura and lung were sound and pressed upwards by the great size of the pericardium. Abdomen.—The liver and spleen very large, forced up the diaphragm into the thoracic cavity; the digestive apparatus and other abdominal organs presented nothing worthy of notice.

Remarks.—The above seems to have been a well-marked case of acute pericarditis. This disease is certainly in many cases difficult of diagnosis from the frequent complication of inflammation of the surrounding organs, and especially pleurisy and peripneumonia. When the symptoms of pericarditis are apparent from the beginning, and an appropriate treatment is adopted, the prognosis would, we think, be of a less grave character, and the opinion of Corvisart "that chronic pericarditis in general leads to a gradual death, while the acute form induces a rapid and certain death," would be less frequently corroborated. The above case, however, would seem to indicate that the disease will generally terminate fatally, notwithstanding a well-directed antiphlogistic treatment.

TO CORRESPONDENTS.

"A convert to the Medical Times" sends us the following "rich morcean" from the last week's *Lancet*. He considers it "a splendid specimen of Wakley's poetical prose composition, which well qualifies him for editing the next edition of *Ossian*." We believe our correspondents is mistaken. Mr. Wakley is not, as a general rule, responsible for the editorial observations in the *Lancet*. He may send it occasionally an odd speech which he had had no opportunity of firing off in the House—but we believe he does nothing more. The "morcean," however, by whomsoever written, is worth giving:—"The new poor-law has an imposing appearance; and, dealing with large masses, works like a vast machine in its manifold arrangements. But it has in it nothing organic—it is all machinery! It has neither hands to help, nor feet to visit, nor eyes to see the poor and afflicted; it has no living blood in its ARTERIES, no throbbing heart, no voice of tenderness, no human soul. God never made it, humanity never blessed it!" The writer must have conceived a singular notion of a vast machine, (not an organ) which is all machinery—when he complains of its being like *Shakspeare's* dotard—sans eyes, sans ears, sans nose, sans everything, and worse than that, without a human soul! This instance shows the danger of plain men aspiring to fine writing. Wakley, or Wakley's employes writing the classic style, presents one with as grotesque an image as the Hon. Member's dancing a hornpipe, or "doing" the gentleman.

"An Army Surgeon" can only practise on sufferance, though in the present state of public opinion there is no fear of his being disturbed by the Apothecaries' Company. We consider the state of the law on this matter infamous.

G. H. suggests to us the formation of a joint-stock association for publishing medical works. He thinks it the only plan to adopt if we would secure a republication of the works of our old authors. Cheapness would, he says, be another result. He considers that if we were to set about it, we could form such an association. We shall certainly think over the matter.

The case sent by W. A. has been submitted to Dr. E., on whom the medical student is invited to present himself personally.

Quæstor.—We are unable to answer our correspondent's first question: with regard to the second question, the 2nd volume of the *Medical Times* is extremely scarce; on reprinting No. 33, we were enabled to make up fifty volumes which were sold immediately. At present two or three numbers of the volume are out of print—the rest our correspondent can procure.

An Army Surgeon, M.C.S.I., a Scotchman, &c.—*By the present regulation of the P. L. Commissioners, no surgeon with Scotch or Irish diplomas can be elected to the medical superintendence of an English union without diplomas from the London College and the London Hall, except in cases where there are no candidates with the latter qualifications.*

If Dr. Verral's paper be shortened we shall find room for it. It awaits him at the office.

M.R.C.S., and A Constant Reader, need fear nothing. No length of time à parte post can give the practice legality, but there would be little chance of interference from that quarter under the circumstances.

G. I. F. Ballina, A Subscriber, Cork, Mr. Lane, Dublin, Mr. Parsons, Edinburgh, Dr. Dupin, Philocrates, and a number of other correspondents, received.

Dr. Clay's "Peculiar Cases in Midwifery, &c.," Dr. Scoffern's interesting "Case of Poisoning by Sulphuric Acid," "The Physiology of Animal Sustenance," Dr. J. B. Thompson "On a Form of Disease in the Feline Animals," with several other interesting communications, are unavoidably postponed till next week.

THE MEDICAL TIMES.

SATURDAY, MAY 28, 1842.

Hunc Nero damnavit,
Sed tu damnare Neronem Ausus es.

If the immense number of letters we are daily receiving from Ireland on the Medical Charities' Bill offer any data for forming an opinion, there never was a question which so powerfully excited the public mind of the profession, as the flagitious measure which, eliminated by the malicious ingenuity of Messrs. Nicholls and Phelan, now impends over our Irish brethren. It is not so much the pecuniary injury which it plainly and legibly enacts against medical men—though that is considerable—nor the peril with which it menaces the country dispensaries—though that is not overlooked; nor even the destitution of medical attendance with which it threatens the poor, though that is not unfelt;—it is none of these things which have roused the practitioners of the sister isle to their present attitude of energetic and united resistance: it is the contemptuous and insulting character of the measure, which, not content with planning the systematic robbery of the practitioner—one of its first results—plots his subjugation into the position of a parochial serf—conspires to make him a kind of unliveried lacquey, who snubbed here by union guardians, and objurgated and examined there by domineering commissioners, may be discharged at pleasure by either.

It is some satisfaction to us, while watching this noble spirit daily develop itself in greater strength and unity, to feel that we were the first—indeed the only English Medical Journalists—to stretch out our hand to the assistance of our Irish countrymen. While that amusing satire on gentility, the Editor of the *Medical Gazette*, like a pampered menial, proud of his servitude, could show no sympathy, save for the misfortunes of his betters—while the Editor of the *Lancet* was over-

looking everything else in his anxiety to give his unfortunate readers those conflagrations of oratory on the Income Tax, which (*O si sic omnia!*) he could not communicate to the House, we were calling public attention to the greatest inroad that has ever been threatened against the interests of the profession before or since the passing of the Poor Law Amendment Act, and exciting our brother practitioners to that resistance which we have now so much pleasure in contemplating, and which promises, we are happy to assure our readers, to be so successful.

But we fortunately are not bound down in the service of either party or egotism—are independent alike of political prejudices and corporate dictation—and it is our pride that there is no suffering portion of our profession, no matter where or how injured, to whom we cannot and will not offer our free but sincere sympathy—our independent but hearty support.

COURSE OF LECTURES ON THE ANATOMY AND PHYSIOLOGY OF THE NERVOUS SYSTEM.

By PROFESSOR OWEN, F.R.S., &c., &c.

(Delivered at the Royal College of Surgeons, London, 1842.)

A RIGID analysis of the functions of the nervous system shows its essential property to be the conveyance of stimulus to a central organ, whence it is transmitted to the moving fibre. The nervous system may be so elaborated and complicated as to produce in the animal a sense of its individuality and self-subsistence; and animals have the perception of stimuli and the power of originating the reflected action which produces muscular contraction. Again, the actions of the sensorium are those of that superadded complication in the nervous system by which impressions once felt may be voluntarily renewed, and what is termed remembrance of the impression may be produced, a result which, in respect of sensation, is analogous to volition in respect of motion. Every idea is the result either of direct reception by the sensorium of an impression, or of the voluntary or involuntary repetition of that action in the sensorium, producing memory. These ideas may be combined and compared, and both the development of the brain and the phenomena of disease show that the processes of thought and ratiocination are intimately, if not essentially dependent upon the nervous system. Most interesting, therefore, is the anatomical investigation of the system of organs on which these higher phenomena of animal life thus seem to depend; and they have, in fact, exercised the research and ingenuity of anatomists and physiologists from the earliest periods of medical science, although from the difficulty of the inquiry, and the extreme delicacy of the tissues, most of the really valuable and satisfactory discoveries in the physiology of the nervous system belong to the latest periods, and have been the fruits of the genius and labour of physiologists who are still living, and of whom the name of the foremost and most successful cultivator of this department of physiology, CHARLES BELL will hold a pre-eminent place in the annals of the science as long as physiology endures.*

The history of the progress of discovery in the anatomy and physiology of the nervous system in

* The distinguished lecturer, when uttering, on the 18th of April, this pleasing testimony to the great services done to science by his illustrious contemporary, little thought that so short a time would intervene before the object of his high eulogium should have passed from the scene of his late brilliant labours. Ten short days after the delivery of the lecture, and Sir Charles had travelled to that bourne where the man of letters, if lost to science, is but the more surely found by fame.

the earlier periods will be best studied in Haller's *Elementa Physiologicæ*, and Sprengel and Hecker's *Geschichte der Medizin*—one of those stupendous works, which, comprehending all that has been said or done upon the subject on which the authors treat, would seem as though only to be written by the erudition and genius of German minds. It is remarkable that, at the earliest periods of philosophy, as in Greece 500 years before Christ, Pythagoras is reported to have distinctly enunciated the opinion that the brain was the seat and organ of the soul. This, likewise, was the doctrine of Plato, Aristotle, Hippocrates, and contemporary philosophers. Hippocrates, for example, states that he found Democritus at Abdera engaged in the comparative anatomy of the brain, in reference to the seat of madness. The greatest advances in the knowledge of the nervous system which were ever made in ancient times, are to be found in the works of Galen, who maintained the brain to be the true seat of understanding or reason. At his time the distinction had been fully recognised between true nerves and those smaller parts, as tendons and ligaments, which were confounded with nerves by Aristotle under the common term *neura*. The lecturer remarked, that a relic of this ancient error is still maintained in modern anatomy by the application of the word *aponeurosis* to sheaths of tendinous structure. Galen also proposed a classification of the true nerves, according to their texture and functions. He taught that from the great brain or cerebrum proceeded the soft nerves, or those of sensation, and that from the small brain or cerebellum proceeded the hard nerves, or those of *motion*. He first recognised the disposition of the true nerves in pairs. He refers to experiments which he made upon the brain, and explained the pathological phenomena of palsy by reference to the distinction of the *motor* and *sensitive* nerves. These passages were quoted from Galen, illustrative of Galen's own knowledge of this fact, and of the knowledge he had acquired from Erasistratus and Herophilus. Upon the revival of literature, Berengeri de Carpi, 1520, signalized himself by correcting the description of Galen as to the place of origin of the sensitive and motor nerves, at least as literally understood, by proving from dissection that no nerves were directly given off from the cerebellum. It is probable, however, that Galen may only have indicated the cerebellum to be the origin of the motor nerves, in the same sense in which Sir C. Bell, in his essay of 1811, describes it as being the place originating the nerves which preside over the involuntary or automatic functions. Sir Charles, in his "Idea of a New Anatomy of the Brain," p. 36, thus writes:—"The secret operations of the bodily frame, and the connections which unite the parts of the body into a system, are through the cerebellum, and nerves proceeding from it." In whatever sense, however, Galen intended it to be understood that the cerebellum was the source of the nerves of motion, comparative anatomy and modern experiments agree in showing that the cerebellum is intimately connected with locomotion. Vesalius, in 1550, first distinguished the cortical and medullary substances in the brain, and described many of its parts, as they are exposed by removing successive slices from above downwards. Coiter, in 1573, made the important discovery that the medullary tissue of the brain consisted of minute fibres, which he termed *fibræ capillares*. He believed that these, inclosed in a sheath of a finer membrane of the brain, formed the nerves; that these, after their escape from the skull, derived a stronger covering from the dura mater. Coiter was the first anatomist who affirmed that a nerve at its origin contained all the fibres which it disperses in its course; but he states that he could find no nerves so small as to consist of a single filament only. Coiter's discovery naturally excited to the investigation of the course of the fibres of the cerebro-spinal axis. Varolius, in 1578, traced the fibres from the spinal marrow along the *medulla oblongata* to the crus cerebri, and their radiation into the cerebral hemispheres. In their course through the medulla oblongata, he found them passing beneath a tract of transverse fibres as under a bridge. The name of the

anatomist to whom this discovery is due, is retained by the name Pons Varolii, still given to the part in question.

In 1647, it would appear that the idea, afterwards revived by Malpighi, that the brain was a gland, and the nerves its hollow ducts, prevailed, since we find Laurentius and Vezlingius contending against it, and appealing to anatomy as negating the tubular structure of nerves. Schneider's ponderous work on catarrh, 1661, may be referred to as containing the first accurate description of the pituitary gland. The greatest advance in the anatomy and physiology of the nervous system after the revival of literature, was made by our countryman, Thomas Willis, professor of natural philosophy in the University of Oxford, in his work entitled "*Cerebri Anatomie cui Accessit Nervorum Descriptio et Usus*, 1664." His anatomy of the brain is an improvement of Varolius', or the rational method. In his physiology of the brain we have the earliest germ of phrenology. He places, for example, imagination in the corpus callosum, perception in the corpus striatum, and memory in the convolutions. He divides the nerves into those of sensation, those of motion, and those of motion and sensation combined. He considers the nerves of spontaneous motion as coming from the cerebrum, of involuntary motion from the cerebellum. He judges of the functions of the nerves chiefly from their terminations—speaks of the stem of the fifth pair as a fasciculus of many nerves, having some a sensitive, others a motor function, collected together for the purpose of sympathy and consent. He describes the double origin of the spinal nerves, and distinguishes those nerves which have a simple from those which have a multiple origin.

Vieussens, in his '*Neurographia Universalis*,' 1685, gave an improved account of the anatomy of the brain, according to the natural mode of dissection practised by Varolius and Willis. His figure of the nervous system, detached from its connections, is more accurate than that given by Willis, the whole having been taken from the human subject. In this sketch or skeleton of the nervous system, the spinal or sympathetic system of nerves is separated from the respiratory system, chiefly formed by the nervous vagus, and that of the organic system or great sympathetic. The anatomy of the brain by tracing the fibres from the spinal chord or medulla oblongata to their different expansions in the cerebral masses, seems to have fallen into disuse, and was not advanced until the beginning of the present century, when it was resumed by Reill, Gall, Spurzheim, Rolando, Ozlander, Burdach, in Germany; and has been successfully pursued by Messrs. Mayo, Swan, and Solly, in our own country. The splendid work of Vieq D'Azyr, contains the perfection of the Vesalian plan of anatomizing the brain, or of that by successive sections. The study of this work is indispensable to the anatomist who would acquire an accurate knowledge of the structure of the cerebral organ. The views of the brain in this work are chiefly those which are afforded by horizontal slices. Burdach's work contains very instructive views by vertical sections, carried transversely through both the brain and skull. The vertical bisection along the middle line exposes many important parts of the brain, and is essential in its comparative anatomy. Although the examination of the brain by sections must be admitted to be inferior to that of tracing the fibres, yet in reference to the structure of so complex an organ, every mode is useful, and should be adopted.

The history of the successive discoveries of the course and disposition of the nerves would involve details unfitted to the present occasion. Among modern anatomists, Walker, Ludwig, the Meckels, Prochaska, Searpa, and, above all, our countryman, Mr. Swan, merit honourable notice. The discovery of the ganglion in the posterior roots of the spinal nerves is due to Prochaska. The classification of natural objects advances with our knowledge of their properties, and are in physiology, as in zoology, the best and most concise expressions of the latest acquisitions in regard to the essential qualities of these objects. Here the learned lecturer gave a summary of the classifications of the nervous sys-

tem, as propounded by Galen, Willis, Prochaska, Charles Bell, and Dr. Marshall Hall. He then proceeded to give a sketch of the history of the comparative anatomy of the nervous system, first noticing the description and figures of the articulate type of that system to be met with in the work of Willis. Then noticing the contributions successively added by Swammerdam, Lister, Collins, the second Monro, Daubenton, and Hunter: he remarked that Hunter was the first in this, as in most other departments of comparative anatomy, to express the facts of the comparative anatomy of the nervous system in their most general terms. The passages alluded to are here given from the third volume of the catalogue of the Museum, containing Hunter's manuscripts, which is in every way very remarkable and characteristic of the genius of the writer:—

"Of the first class of animals that have organs of sense, and consequently have brains."

"The brain," says Hunter, "in this class of animals is scarcely similar in any respect to that of the most perfect animals with which we are in general more acquainted. It consists of a pulpy substance somewhat transparent, which is easily squeezed out when the brain is cut into. It appears in some, and perhaps in all the lower classes that have brains in the shape of a ring, from the circumference of which arise the nerves as radii from a centre. Through this ring (in such) passes the œsophagus. I am apt to believe, however, that this ring is not wholly brain, but a union of two large lateral nerves, which unite under the œsophagus. This at least appears to be the case with the next class. It is not inclosed in hard parts, and is not defended from pressure or injuries more than any other internal part."

Of the second class, or Insects.

"The class of animals immediately superior in sensation to the foregoing, is, I believe, that class called insects, both aerial and aquatic. We find in them an increase of senses. The first class, we were inclinable to believe, had but two senses, but here we are pretty certain of four—viz., touch, taste, hearing, and sight; how far they have smell I have not been able to discover, but should doubt it."

"The brain lies in the head of the animal, and consists of a small rounded body, giving off nerves in all directions to the different parts about the head, such as the optic nerve, &c. The brain is a pulpy substance, somewhat transparent, which gives it a bluish cast. From the posterior, or lower part of the brain, close to one another, go out two large nerves; one passes on each side of the œsophagus, and they then unite into one, forming a knot at this union. They disunite again, and so unite and disunite alternately through the whole length of the animal, at every union giving off the nerves as from the brain. This structure, I suspect, answers both the use of a medulla spinalis and the great intercostal nerve."

Of the third class, or Fish.

"This class of animals is a considerable remove from the former in complication of structure. We have observed that they have complete circulation, making in the whole about a second. They are endowed with five senses."

The brain in this class is, upon the whole, much larger in proportion to the size of the animal than in the former. It is a very irregular mass, but the several parts that are similar to these in a still superior order may be picked out. The brain varies in shape in this very much more than in the other class of animals. The cerebrum in some, as in the skate, is detached to some distance from the other parts; in others it is pretty closely connected. There are more parts in some than there are in others.

They have a medulla spinalis, or a contraction of the brain down the back.

In the first class we had the brain surrounded by soft parts only; in the second it was closely surrounded by hard. In the present class, the brain has a case of hard parts for itself called the skull, but it is too large for the brain, therefore this

is attached to the skull by a cellular membrane which makes a kind of tunica arachnoides.

The nerves arising from the brain in this class are very large, and there seems to be nine pairs."

Of the fourth class, or Amphibia.

"The brain in this class is very small in proportion to the size of the animal, smaller than even what it is in the former, or fishes. It would seem, from external appearance, to be made up of many parts which are not hidden, or do not lie one upon another, but are very much detached, and follow one another, or are more in one line or direction, and not compacted. The whole is an oblong body composed of five eminences, with their common basis.

The two anterior consist of the cerebrum; the two middle, I should suppose, of the nates and testes, which I suppose to be the middle lobes detached, because in the bird they are more underneath, not so much between the cerebrum and cerebellum. The posterior is the cerebellum, consisting of one body entirely. It would appear as if the order of size were inverted, viz., the two middle lobes seem to be nates and testes, yet they are much too large to bear the same proportion as in the higher classes. Every eminence has a cavity or ventricle in it, therefore in this class there are five cavities or ventricles. The cavities in the cerebrum are larger than in the others, and are similar to those of the higher classes; i. e., they have a large eminence projecting into the cavity, which is the major part of the brain in the bird. In the others, the cavities seem to be pretty nearly of the shape of the body, or protuberance in which they are, and they are very large in proportion to the size of the brain. The tunica arachnoides covers almost the whole brain. It does not adapt itself to the eminences and cavities, but is connected with the pia mater by a cellular membrane on its inside, and to the skull, or dura mater, on its outside.

There are no convolutions on the external surface of the brain; it is covered smoothly by the pia mater. The nerves arising from these brains are very large, nearly as large as in the human. There are ten pairs that go out of the skull, and the accessories joins the ninth pair.

The first pair are very large at their beginnings, becoming very small at once, which has the appearance as if they arose from two small round bodies. Although the crocodile is classed with the amphibia, and really comes nearer to that class than to any other that I know of, it has not all the same character as has been observed. It comes nearer to the bird than any of the other amphibia, and therefore is a degree higher. The brain, although it has the same parts, has them closer connected, and the skull is more in contact with it.

Of the fifth class, or Fowl.

"The brain in this class is larger in proportion to the size of the animal than in the foregoing. It consists of the pulpy substance, but is not very distinctly of two kinds, the cortical and medullary. It would seem to be made up of six parts, viz., the two hemispheres of the cerebrum; the two round bodies, one on each side of the medulla oblongata, pretty much detached, which would seem to answer for the two middle lobes, although their situation with regard to the skull is different, for they are under the lateral processes; fifth, the cerebellum; and sixth, the medulla oblongata, which is the common base. The cerebellum is considerably behind the posterior lobes, and is large in proportion to the size of the whole brain.

"The two hemispheres do not seem to unite, although they are so close to one another as to be hardly separated by means of the inner sides of the two lateral ventricles. The two lateral ventricles are very large, and may be called the broad cavities; they begin forwards, near the anterior points, where the olfactory nerves arise, and near that surface where the two hemispheres are in contact with one another; each ventricle passes backwards, and winds round the posterior end, but does not extend so far to the outer or lateral part of the hemisphere as to come forwards again. The part of the brain which makes the inner and posterior wall of this cavity is very broad, and so

thin in many places as to appear like a membrane or pia mater only. On the inner surface it is concave, on the external it is convex, and the opposite or inner side of the cavity, which is the major part of the brain, is convex, which answers to the concavity of the outer; so that the two surfaces are moulded to, and in contact with, one another. When this outer portion is taken off, the brain is nearly of the same shape and size as before. The plexus choroides is a vessel which comes from the lower part of the cavity of the two thalami, or from the upper surface of the medulla oblongata, and runs backwards and upwards through the cavity and spreads into a broad, loose, flat end. At the lower part of the division of the two hemispheres is the third ventricle like a groove; the anterior end terminates in the infundibulum, below the optic nerves, but at some distance; the posterior end is continued into the fourth ventricle in the quadruped, or the sixth ventricle in this class.

"The two lateral bodies which are on the sides of the medulla oblongata, and somewhat under the posterior lobes of the cerebrum, somewhat in the situation of the cerebellum in the next class, are equal in size to one-sixth of the whole brain. They have each a cavity in the middle, which make the fourth and fifth ventricles, and these communicate with or enter at the communication of the third with the sixth, so that all those six ventricles communicate with each other."

"The cerebellum is a prominent pyramidal body, standing on the posterior and upper part of the medulla oblongata, behind and somewhat between the posterior lobes of the cerebrum, and in contact with them; it is more convoluted than the cerebrum, which convolutions are sometimes similar to the human."

Of the sixth class, or Quadrupeds.

"The brain in this class is in general larger than in the preceding, and the parts more compacted, the whole mass being brought into nearly a globular figure. The cerebellum is more immediately under the cerebrum, and the convolutions in the cerebrum are deeper. The nates and testes are four small bodies with no visible cavities, which are not seen externally, but lie at the posterior end of the third ventricle. The ventricles are only four in number. The two lateral ones communicate under the lower edge of the septum lucidum, and are pretty large, beginning in the anterior lobe of the cerebrum by a blunt end pretty far forward, going directly back, and when got some considerable way, bending outward and downward, then forward, and still down, and also inward, and ending nearly under their origins. In them lie the corpora striata, the thalami nervorum opticorum, the plexus choroides, and the fornix. The third ventricle is directly under the fornix, and communicates forwards by a small opening with the infundibulum, which goes down to the pituitary gland; behind, it communicates with the fourth ventricle, which is partly in the medulla oblongata. The cerebrum and cerebellum end by four peduncles in the tuberculum annulare, and the medulla oblongata goes out from it; at the going out of which are four pyramidal bodies, viz., the corpora olivaria and corpora pyramidalia. In the brain, the cortical substance is on the outside, in the medulla spinalis within; in some it is in one line running down, in others two. The nerves which go out of the skull are nine pair, and the accessories which goes out with the eighth."*

Cuvier added largely to this branch of comparative anatomy, and corrected that part of Hunter's classification which was defective in considering the differences presented by the nervous system of the four classes of vertebrated animals, as equivalent to those which they respectively offer when compared with the nervous system of the molluscæ articulate. Our knowledge of the details of the vertebrate, molluscous, articulate, and nematocercous types of the nervous system, has been greatly augmented by the labour of many living anatomists; but it is still a field which is far from being exhausted.

A distinct department in the history of neurotomy, is that which relates to the microscopic

investigation of the nervous tissue. Malpighi, it is well known, was the first who applied the microscope to the investigation of the anatomical tissues. He confirmed, by its use, the discovery of the minutely fibrous texture of the brain: he selected from amongst its other parts the septum lucidum for this inquiry, and describes the longitudinal course of the fibres in that part. Lewenhoeck accurately distinguished the microscopic structure of the grey substance as compared with the white. He describes the former as consisting chiefly of minute capillaries with intermixed granules, and the white substance as consisting of reticularly interwoven fibres. Ruysch's minute injection established the accuracy of Lewenhoeck's microscopic observation of the vascular structure of the grey substance. In regard to the primitive fibres of nerve Loewenhoeck calculates that a nerve of the size of the whisker of a lion must contain at least 1,000 primitive fibres. It is to Fontana, however, that we owe the direct observation and distinct indication of the primitive nerve fibres under the name of *cylindres nerveux primitifs*. Each has a diameter of 1,000th part of a line, contains corpuscles, and a transparent fluid, and is sheathed by a fine spiral thread. His figures are said by Ehrenberg to be as accurate as could be given with the microscopic powers at his disposal, but Ehrenberg denies the external spiral sheath. This, however, appears to have been recently re-discovered by Dr. Martin Barry. The most important work on the microscopic anatomy of the nervous system is that by Ehrenberg, contained in the Berlin Transactions of 1836. The primitive fibres of the brain, spinal chord, olfactory optic, and acoustic nerves differ from those of the rest of the nervous system in the more minute size, and their proneness to assume a varicose appearance under slight pressure, whence Ehrenberg supposed that form was their natural characteristic. The primitive fibres of the ordinary nerves—those of common sensation and motion—are larger, and only assume the varicose appearance when strongly compressed. The double outline of these fibres is the most obvious characteristic. Schwann describes the opaque substance included by, or forming this double outline as a white filamentous tissue. Remak has demonstrated what he terms a band-like axis in the centre of the primitive nerve fibre. Trevirans, Purkinje, and Rosenthal, have likewise contributed observations proving the compound structure of Fontana's primitive nerve fibre, and a minute description of this structure will be found in Dr. M. Barry's recent paper on Fibre, read before the Royal Society. These demonstrations of the structure of the primitive nerve fibre are not to be regarded as the effect simply of division of that fibre carried to a great degree, as has been done by Fontana, but a proof of the definite and self-subsistent nature of the primitive fibre. This might be illustrated by the familiar example of a bundle of sticks. The constituent stick in the unravelling of the bundle represents the primitive fibre of nerves, or of muscle. There may be as definite a structure in the primitive fibre as in the sticks forming the bundle. Each primitive fibre may contain within itself smaller constituents, but these constituents, like the ligneous tissue of the stick, are something more than mere subdivisions of the primitive fibre into similar but minuter filaments.

GALEN'S REPORT OF A CASE OF HEPATITIS.
(De Locis Affect. lib. v. c. viii.)

"Soon after my arrival in Rome, Glaucon, the philosopher, took a great fancy to me in consequence of my reputed skill in the diagnosis of diseases. Meeting me one day in his walk, he stopped to shake hands, and thus accosted me: You are the very person I want; I have this moment left one of my friends, a medical man himself, whom you may have seen with me the other day, very ill; suppose we go and call upon him.—Where does he live, and what's the matter with him? I said.—Glaucon, who is of a most frank disposition, replied, I have heard from Gorgias and Appelles that you have

* Hunterian MS. Catalogue.

on more occasions than one given such an accurate diagnosis, that it seemed more like the result of divine inspiration than of human knowledge; and I am glad of this opportunity of putting to the test this talent of yours, that I may satisfy myself whether you really have this marvellous faculty of presaging the most obscure questions.

By this time we had reached the door of his friend's house, so that I had not even a moment to tell him, as I have so often done to you, that, if in some cases we have one or more of those symptoms which leave no doubt as to the nature and issue of an existing disease, in other cases they are so far from being satisfactory or unequivocal that we require a second or even a third examination of the patient before we can with any confidence pronounce our opinion.

As we entered the house, I observed in the first vestibule that a servant was carrying from the invalid's room a vessel containing a serous fluid, which appeared to be slightly sanguinolent, and not unlike the washings of fresh meat.

This at once satisfied me that there was some affection of the liver;* but I made no sign in any way of what I had observed, and we at once proceeded to the patient's room.

The first thing I did was to feel his pulse, in order to determine whether the affection was of an inflammatory nature or not. As the patient was a medical man himself, he remarked that his pulse might have increased in frequency by the fatigue and exertion of getting up to stool; but I had already assured myself that his complaint was strictly inflammatory.

I observed at the same time on the selle of his window a pot which contained what seemed to be hyssop mixed with honey and water; nothing more was required to show me that our gentleman thought that he was labouring under a pleurisy.

This idea was probably suggested by the sharp pain which he felt under the false ribs—a symptom however which is very common in inflammation of the liver also—by the cough, and his short hurried breathing.

Having thus learned all that was necessary, and profiting of the opportunity which luck put in my way of giving Glaucou a high idea of my skill, I placed my hand over the false ribs of the right side, and told the patient that there was the seat of the disease; he admitted that it was. Glaucou, who supposed that it was only from feeling the pulse that I made the discovery, was at once delighted and surprised.

To increase his astonishment, I said to the patient: 'Besides the pain in the right side, you are distressed every now and then with a troublesome dry cough, with little or no expectation.'

While I was yet talking, he was seized with just such a fit of coughing as I had described. Glaucou could no longer conceal his surprise, and forthwith began to praise me to the skies.

Wait a little, I said to him; do not suppose that this is all that my art enables me to do. Then addressing myself to the patient, I continued—'Do you not find the pain to be increased, and feel a sense of weight in the right hypochondrium, whenever you take in a deep inspiration?' He at once replied that it was so, and seemed to be almost as much astonished at my prediction as Glaucou himself.

Seeing that fortune continued to smile on everything that was done, it occurred to me to say something about the shoulder; for I was well aware that in most diseases of the liver

there is a feeling of dragging down of the right shoulder; I had no sooner made the allusion than the patient at once confessed that it was just as I had predicted.

I will add only one other word more, I said; I will tell you what you have supposed was your disease. Glaucou exclaimed that he should not now be surprised to hear me divine even that too. The patient, astonished at my confidence, looked at me most steadfastly, awaiting with anxiety what I was about to say.

I told him that he believed that he was labouring under a pleurisy; he immediately answered that it was really so, at the same time expressing his profound veneration for my skill. His medical attendant also had formed the same opinion; for he had just ordered an oily fomentation to the side, such as is commonly used in this disease.

From this period, Glaucou formed the very highest opinion of my professional abilities, although hitherto he had always spoken slightly of medicine and of physicians; but it must be confessed that he had probably never come in contact with any one of consummate skill.

I have detailed these particulars, adds Galen, in order that, if fortune throws in your way a favourable opportunity, you may know how to turn it to the best account; for it not unfrequently happens that we are placed in situations by which with good tact we may reach celebrity, although the greater number of men from ignorance cannot avail themselves of the chance."

(A very good commentary on the well known lines—

There is a tide in the affairs of men,
Which, taken at the flood, leads on to fortune;
Omitted, all the voyage of their life
Is bound in shallows and in miseries.

Few men feel the truth of the maxim with greater force than many of our own profession.)
—*Med. Chir. Rev.*

THE HEAD OF GOOD THE MURDERER.

THE head of *Good* was of a very inferior description. The whole was small. The front, or portion devoted to the intellect, very contracted. The upper part, devoted to the higher moral feelings, very defective in its anterior portion—narrow and sloping. The portion devoted to refinements of feeling (sometimes termed the organ of Ideality) miserably small. The portions devoted to those feelings which brutes possess in equal force with ourselves, very large in general, especially Caution, Cunning, Disposition to Violence, (Destructiveness,) Love of Property, Love of Notice, and Sexual Love; but the organ of Parental Love was enormous, such as is rarely seen in the male sex, and overhanging the organ of Sexual Love so much as to make a superficial phrenologist suppose the latter organ to be small.

These particulars have been furnished us by Dr. Elliotson, who has promised us the various measurements and a detail of the developments, as well as sketches of the head, next week.

ACCOUCHEMENT.

By G. FRAYER BRADY, Esq., Medical Superintendent of the
Dungloe Dispensary.

J. B., æt. 38, the mother of five children, was taken ill at 11 p.m. April 18th. When I saw her at 9 o'clock on the following morning, I found the entire body of a full-grown foetus had passed the os externum, and was connected to the head, which was in utero, by a narrow strip of integument. The midwife, in her endeavours to extricate the head, had torn

the neck completely through. On examining the child I found there were six toes on each foot, and that the knees were ankylosed; the elbows were also immovable, and each hand was furnished with six fingers: taking into consideration these appearances, with the protrusion of a bag containing fluid at the os uteri, connected to the trunk by the strip of skin, I was convinced that a collection of water in the head prevented its being expelled by the natural efforts, or extracted by the great force evidently used by the midwife; I therefore made a perforation with the point of a pair of scissors, which gave exit to about two quarts of straw-coloured fluid. I then placed the crotchet in the base of the skull, and by pulling gently, succeeded in bringing away the head—a frightful looking mass, one aperture sufficing for mouth and nose, the upper margin of which was divided like a double hare-lip, and the eyes obliterated. I was anxious to make an examination of the interior of the head and chest, but would not be permitted, and although I afterwards tried to get the malformed object into my possession, I was frustrated.

There is one point in this case which I think deserves attention, and is of practical importance. When I first felt the bag of fluid at the os uteri, I was inclined to think it was the membrane of another child, the woman formerly having had twins, and the distention of the abdomen leading one to suppose there was something more than the head of a common child in the uterus; indeed, the woman herself thought there was another. However, this only confused me for a moment, for directing my finger along the strip of integument, I discovered the true nature of the case.

REVIEWS.

On Gout, its Cause, Nature, and Treatment,
By John Parkin, Honorary and Corresponding Fellow of the Royal Academies of Medicine and Surgery in Madrid, Barcelona, and Cadiz. John Hatchard.

THIS is a book of some pretension. The author tries to be original, and if the mere expression of something, however absurd, that has not been expressed exactly in ipsissima verba before be originality, our author has attained his object. Some books are written upon the *ad captandum* system; at least, so we have been told. But this book has not been written *ad captandum vulgus*, for assuredly gout is no very common disease; our daily labourers know nothing of it—and it seems to shun most carefully our common soldiers and sailors. It does, however, attack some of "Adam's race," and to these our author has a perfect right to hold out his willing hand. There is one good quality in this treatise, it is short; it consists of three moderately-sized chapters, one of which is devoted to the *cause*, another to the *nature*, and a third to the *treatment* of gout. The chapter on the *cause* is the most interesting, if not the most profound; we have here, not only references to the works of Hippocrates, Galen, Celsus, and Paulus Ægineta, with whom all are familiar, but also to those recdite authors with which Mr. Parkin is so well acquainted, and who have shed so strong a light upon the subject of gout, viz., Alexander Trallianus, Haly Abbas, and Demetrius Pepagomenus. With the assistance of these learned personages, he has discovered that the cause of gout is a *poison* that springs from atmospheric causes, and in proof of this, the author makes the following most interesting and judicious references to facts:—

We have also, some ancient examples of the same kind. Athenæus says, Pithesinus has left it on record that, in his time, the mulberry trees

* The ancients were in the habit of regarding the serous evacuations from the bowels at the commencement of dysentery and other intestinal affections as proceeding from the liver, and hence they gave the name of *hepatorrhea* to this symptom.

did not bear fruit for twenty years, during which period gout prevailed so generally, and so furiously, that it not only attacked men, but even women and children, as well as cattle, two-thirds of the sheep being carried off by it. In consequence of the failure in this fruit an inference was then drawn, that mulberries were a preservative against gout; but as the cattle were affected at the same time, the want of this article of diet could not have been the cause of the disease. There must have been some general one—probably atmospherical—as it is only on this supposition that we can account for the simultaneous infection of the human and brute creation.

Having satisfactorily proved the existence of a poison as the cause of gout, our author naturally proceeds, in the next place, to the *nature* of this affection, and after showing the contradictory opinions that have been entertained, and the absurdity of viewing it as a disease purely inflammatory, or congestive, or nervous, he is inclined to follow, or rather to agree with the *discriminating* views entertained by Frank, who says, that

Gout is a disease *sui generis*, which can assume the form of all diseases, and present itself under the character of a FEVER, AN INFLAMMATION, AN ERUPTION, A FLUX, A RETENTION, OR A NERVOUS AFFECTION.

The treatment of gout is a subject of great importance; and we are happy to inform the profession that this disease is no longer the *opprobrium medicinæ*; our author has discovered a "specific" which acts by neutralizing or rendering inert the poison productive of the disease; this agent, and we are anxious to disclose it to the profession, is CARBONIC ACID GAS. We have no doubt our author could have adduced *numerous* cases in proof of the efficacy of his *specific*, but not to render the book tedious, he has, we think, very judiciously confined himself to *one* case. The case was that of a Mary Murphy, who was cured "in *about* three weeks, notwithstanding that *she* had supposed from the number of joints affected, that this attack would have been the longest and the most severe of any she had experienced."

A Discourse Introductory to a Course of Lectures on the Institutes of Medicine and Materia Medica, delivered before the Medical Class of the University of New York at the Sessions of 1841-42. By Martyn Payne, A.M., M.D., Professor, &c. Boston.

THIS is one of the rarest, literary, and scientific *gems* that have lately issued from the American press. The "go-ahead" principle is the "go" in America, and of this we have, in the discourse before us, a most splendid exemplification. What can be more appropriate or pregnant with meaning than the following introductory observations?

"Gentleman,—It being a part of the duties of my chair to teach you the philosophy of medicine, I shall endeavour at all times to follow the simple path of nature; and in so doing we shall find nothing but an admirable system of design, intimately associated in all parts, always reaching from the rudimentary development of the organic being to the ultimate *extinction* of its *laws*, whose multifarious phenomena perpetually sprung from principles which are established in the germ. Whatever, therefore, may be the complexities of disease, you have the consolation of knowing that it is simple in its essential elements, that these elements are for ever present, and that you will be mainly employed in investigating the modifications which they undergo. Here, then, *you* will *always* stand upon a great and immutable foundation of nature. This will always be your guide, always your point of departure, and to this you will always return from your excursions into the paths which radiate from it in conformity with the constitution of the great plan of organic life.

This, it must be admitted, is excellent, and

clear as the pebbled brook, and prepares us for the business-like and philosophic announcement which immediately follows:—

But in all that I may say, *now* or *hereafter*, I wish it to be distinctly understood that my remarks have *no intended* application to *men*, but are simply designed for the promotion of truth—of that truth which was so beautifully recommended to your admiration the last evening by its "professor in theory and practice."

Amidst the "elegant simplicity" which characterizes *truth*, the Professor, sensibly alive to the difficulties that surround medical science, thus lucidly and elegantly expresses himself:—

But however elegant this simplicity in the most essential attributes of organic beings, such are the natural modifications of the properties of life in the different organs and tissues, and such their liability to change from a thousand influences, and according to the nature of those influences, and although nothing appear but under the direction of some everlasting law which operates according to the existing combination of causes—medicine is nevertheless the most profound, the most complex, the most difficult of all human pursuits. It was once thought to have been only worthy of the gods—and temples were consecrated to their disciples.

After this the learned Professor "goes ahead" with astonishing power against the mechanical and chemical physiologists of the present day, and is naturally led into the following judicious and highly original observations:—

It is not here, however, on American soil, that those seeds of darkness have taken root, with a few rare exceptions—our own medical philosophers have gone on cultivating philosophy. You will not soon forget that spirit-stirring reference which was made by our professor of surgery to the revolutions of empires, and upon which as I imagine, as well as upon the facts which I have now announced, he founded his conclusion, that the city of New York may yet be destined to supply Europe with her medical philosophers, and that, too, not unlikely within a century hence!"

Here I had intended to have made a hiatus in my discourse, but the patience with which you have listened encourages me to persevere to the last. I have been admonished by kind friends, within and without the profession, that a doctor's discourses should never trespass beyond the good limit of an hour, and this being my first address to a public audience, I had almost determined to surrender my wonted habits of thinking for myself. But it certainly appears to be an established rule that a professor of medicine can hazard only an hour, whilst the more bountiful allotment of two hours is assigned to the parson (when he chooses to take it), six hours to the lawyer, and from twelve to forty-eight hours to a member of congress, whilst each helps himself within the limits respectively—the rule is never to leave the room nor to snore aloud! For myself I shall only ask for the benefit of clergy.

These quotations will enable our readers to judge of the merits of this extraordinary production; and should they be inclined to purchase the "Discourse" itself, we have no hesitation in saying that they would soon find that the book could be turned to a very *useful* purpose.

Principles of Human Physiology, with their chief Application to Pathology, Hygiene, and Forensic Medicine; especially designed for the use of Students. By William B. Carpenter, M.D.

THIS is one of the best elementary systematic works on human physiology that have for some time appeared. It embraces an immense body of facts, and points out the newest sources of information in every department of the science. It wants, indeed, the originality and acumen which characterize the treatise of Muller, and the metaphysical and abstract power which ap-

pertain to that of Burdach; yet, from its comprehensiveness and great simplicity, it is calculated to be more useful to the junior student than either of these celebrated productions. The references to comparative anatomy, without which human physiology cannot be understood, are copious without being profuse, or without overloading the subject.

After a short introduction, referring to the connection which physiology bears to the other branches of medicine, the subject is discussed in fourteen chapters, which embrace the following highly interesting subjects:—The place of man in the scale of being: general views of the functions of vegetation and animal life: functions of the nervous system: sensation and the organs of the senses: muscular contractility: voice and speech: influence of the nervous system on the organic functions: digestion and nutritive absorption: the circulation: respiration: nutrition: secretion: animal heat: reproduction. We do not think the general arrangement much to be commended. The *animal* functions, which are the most intricate, are brought under the review of the student before the *nutritive* or *organic*. These last, appertaining both to vegetables and animals, form the simplest of all the functions, and ought, in our estimation, to precede those more refined and etherealized functions which are superadded to the vegetative, and which constitute the grand peculiarity of animal existence. This objection is obviated, however, in some measure by the preliminary view of the vegetable and animal functions given at the commencement of the work.

The first chapter treats of the places of man in the scale of being; and to arrive at a just conclusion, our author gives a rapid sketch of the distinctions between plants and animals; and after describing in a general manner the outline of the principal subdivisions of the animal kingdom, viz., the radiata, mollusca, articulata, fishes, reptiles, birds, and mammifera, he proceeds to the "characteristics of man." These characteristics are examined with some circumstantiality, and our author sums up the inquiry in the following just observations:—

Although, as we have stated, there is nothing in man's present condition which removes him from the pale of the animal kingdom, and although reasoning powers differ rather in degree than in kind from those of the inferior animals, he seems distinguished by one innate tendency to which we have no reason to suppose that anything analogous elsewhere exists, and which we might term an instinct, were it not that this designation is generally applied to propensities of a much lower character. The tendency here referred to, is that which seems universal in man to believe in some unseen existence. This may take various forms, but is never entirely absent in any race or nation, although (like other innate tendencies it may be defective in individuals) attempts have been made by some travellers to prove that particular nations are destitute of it; but such assertions have been from a limited acquaintance with their habits of thought, and with their outward observances. For there are probably none that do not possess the idea of some invisible power external to themselves, whose favour they seek, or whose anger they deprecate, by sacrifice and other religious observances. It requires a higher mental cultivation than is always to be met with, to conceive of this power as having a spiritual existence; but wherever the idea of spirituality can be defined, it seems connected with it. The vulgar readiness to believe in demons, ghosts, &c., is only an irregular or depraved manifestation of the same tendency. Closely connected with it is a desire to share in this spiritual existence which has been implanted by the Creator in the mind of man, and which, developed as it is by the mental cultivation that is almost necessary for the formation of the idea, has been regarded by philosophers in all ages as one of the chief natural arguments for the im-

mortality of the soul. By this immortal soul, the existence of which is thus guessed by man, but of whose presence within him he derives the strongest evidence, from revelation, man is connected with beings of a higher order, amongst whom intelligence exists, unrestrained in its exercise by the imperfections of that corporeal mechanism by which it operates, and to this state—a state of more intimate communion of mind with mind, and of creatures with their Creator—he is encouraged to aspire as the reward of his improvement of the talents here committed to his charge.

From the elementary nature of the work before us, any detailed account of what the book contains would here be out of place. We must confine ourselves to generalities.

The chapter on the nervous system is full of highly interesting matter, and to which we can afford space to advert only in the most cursory manner.

The elementary structure of the nervous system, according to our author, consists, 1st, of white nervous matter, which is *tubular*, the tubes filled with a kind of pith, and presenting at their peripheral and central extremities a *looped* form; and, 2ndly, of cineritious or grey matter, which consists essentially of a plexus of vessels, in which the white fibres seem to be lost, and among which grains or nucleated cells are mixed up. The nerves are of two kinds, the *afferent* which convey impulses to the nervous centres, and the *efferent* which transmit impulses of an emotional or volitional kind from the nervous centres. The terms *afferent* and *efferent* appear to us highly appropriate, and will in all probability be henceforth employed by physiologists.

In his view of the comparative anatomy of the nervous system, our author objects, and we think justly, to the descriptions of the nervous system of the *acrita* of Macleay, in which the nervous matter is said to be "*diffused*" through the gelatinous mass of such animals. Our author with more probability conceives that filaments may exist, although, from the extreme delicacy of the structure, the filaments have not been detected; analogy, indeed, and the existence of nervous filaments in animals of a similar kind, but better adapted for anatomical investigations, lead to the conclusion of our author. We shall not follow our author through the description, short and comprehensive though it be, which he gives of the nervous system of the *invertebrated* animals, which consists essentially of ganglia, with their *afferent* and *efferent* nerves.

In the vertebrated animals, the nervous system is more complicated, consisting of the spinal cord, the encephalon, the motor and sensitive nerves, with their ganglia, and the ganglionic system or great sympathetic nerve. The structure and functions of these parts are treated with much perspicuity, and although we can discover here nothing absolutely new, yet the known facts and conclusions are impartially and correctly given. The following passage on the functions of the cerebrum will be read with interest:—

That the different portions of cerebrum have different functions in the complex operations of thought, must be admitted to be by no means an improbable speculation; and it is well known that under the name of phrenology, or the science of mind, a systematic allocation has been made, of what have been regarded as the several fundamental powers and faculties of the mind to certain parts of the cerebral hemispheres. This was first attempted by Gall, who states himself to have been guided in his determinations by observing on the heads of those who manifested any remarkable faculty, or tendency to a corresponding prominence, and to have found confirmation of his inferences by comparing in like manner the skulls of the lower animals with their peculiar powers and dis-

positions; both these branches of inquiry have been taken up by numerous observers, and a large amount of evidence has been adduced by them in support of Gall's views, which appears in itself plausible, and which is regarded by many physiologists of much intelligence as quite decisive. Nevertheless, it does not appear that the doctrine is widely received amongst those whose peculiar attention to the physiology and pathology of the nervous system give them the highest authority on the subject, and much additional proof would seem to be requisite before it can take rank as substantially true. It may be freely admitted that mankind is in the habit of forming an impression of an individual's intellectual capacity by the height and expansion of his forehead; and that a low forehead and crown, with great development of the occipital portion of the brain, generally accompanies a character in which the influence of the animal passions is predominating, and correspondences even more detailed may be admitted without the inference being then conclusive that these several parts are the distinct organs of the faculties of which we judge by the relative size. It may be thought to be in regard to the form of the head very much as in respect to character of the face, that we may draw from it a general idea as to the character of the mind, and not infrequently be able to predicate correctly some minute details, and yet that an attempt to localize the organs more minutely may be as destitute of truth as were the details of the system of Lavater. Moreover, a fundamental doubt hangs over every destination of function which results from a comparison of the size of the supposed organ, or region, in different cases. If it be true that the grey matter only is the source of power, and that the white is merely a conductor, we have no right to conclude that the total size of the organs affords a measure of its power, until it has been shown that the thickness of the coloured substance can be judged of by the size of the brain, or of any part of it. Certainly there is a considerable variation in this respect among different individuals, and it is yet to be proved that the relation is constant in different parts of the same individual brain. Until this is substantiated all inferences drawn from correspondence between the prominence of a certain part of the brain and the intensity of a particular function, are invalid, that is, if the general doctrine of the relative functions of all the grey and white matter be true. Moreover, there is, unfortunately, a considerable uncertainty attending all phrenological observations which are made upon the cranium rather than upon the brain. Thus, we have seen discrepancy between the statements of Gall and the facts ascertained regarding the comparative weight of the cerebellum in castrated and entire horses. It appears to the author, too, that comparative anatomy and physiology are very far from supporting the system when their evidence is fairly weighed. It is a very curious circumstance that the difference in the antero-posterior diameter between the brain of man and that of the lower mammalia, principally arises from the shortness of the posterior lobes in the latter, these being seldom long enough to cover the cerebellum. Yet it is in these posterior lobes that the animal propensities are regarded by phrenologists as having their seat; on the other hand, the anterior lobes in which the intellectual faculties are considered as residing, bear in many animals a much larger proportion to the whole bulk of the brain than they do in man. Again, comparative anatomy and experimental alike sanction the conclusion, that the purely instinctive propensities have not their seat in the cerebrum. These examples, and many similar ones that might easily be added, collectively show the uncertainty, to say the least, of the inferences of many regarded as firmly established.

This will afford some idea of the arrangement and style of the work. We cannot enter more fully into the analysis, and even a full analysis will not impart a just idea of the merits of the work. The author has executed his task with great ability, and must be regarded as one of the ablest expounders of physiology in this country.

Eleven Chapters on Nervous or Mental Complaints, and on Two Great Discoveries.
By William Willis Moseley, A.M., LL.D., M.R.C.S., &c., &c., &c.

THIS is as arrant a piece of quackery as has disgraced for some time the public press, written too by a *clergyman*, whose duty it is to set an example to his flock of uprightness and truth, instead of which, we find impressed on every page the gospel ignorance, combined with unblushing impudence and low self-cunning. The book should be burned by the common hangman, and its author confined for the term of his natural life to hard labour in a madhouse. We are perfectly aware that anything we can write will have no effect upon such a character, and we almost begin to despair of bringing the public to a sense of their own interest and duty, in reference to medical quackery. The public are both ignorant and credulous, and the knaves of quackery know this, and turn it to their own unhallowed purposes. The only means left for us, as guardians of the profession, and of the public, is to hold up, at every convenient opportunity, these transgressors of public morality to execution, and to warn the public of the existence of such impostors. A quack is the basest of all base characters, and the public should know this. He appears in the guise of a friend, but is soon found by experience to be a robber and plunderer. He lives by fraud and falsehood, and the grosser the lies he promulgates, the more vehemently he reiterates them. Totally ignorant of the principles of medical science, medical or surgical practice is with him necessarily a series of blunders. His ignorance imparts temerity, and victim after victim falls. He is a wholesale murderer. Would that the public were alive to the horrid nuisance!

MEDICAL MEMS. OF THE WEEK.

By PERISCOPICUS.

POISONS IN THE BLOOD.—Professor Liebig, says Mr. S. Lane, has drawn an interesting comparison between the process of fermentation and the action which is excited by the introduction of certain poisons into the blood. He points out that in the process of fermentation the yeast, which is oxidised gluten undergoing putrefaction, effects a decomposition in the sugar of the wort, by which it becomes converted into alcohol and carbonic acid; while the gluten, which the wort also contains in large quantity, undergoes oxidation, so that the original yeast employed appears to have multiplied itself perhaps a hundred-fold. But if the yeast had been placed in a solution of sugar free from any gluten, the conversion of the sugar into carbonic acid and into alcohol would have been equally effected, but instead of the yeast being reproduced in greater quantity, it would have entirely disappeared. Now, we see that in small-pox, when the poison is once introduced, an action is set up by which a conversion takes place of some of the constituents of the blood or of the solids into a matter similar to itself, and that when the disease has run its course, the system is no longer susceptible of this action, and can no longer reproduce the poison, any more than yeast can be produced in a solution of sugar undergoing fermentation after the gluten has been exhausted. He argues, therefore, that the poison has acted upon some element originally in the blood, but which is not essential to life, and which, when once removed, is not reproduced. Thus he would explain the mode of action of all poisons which are contagious or infectious, and which leave the system unsuceptible of a second attack, such as measles, scarlatina, small-pox, &c.

While in those poisons of which the system remains susceptible as often as the poison is applied, as in syphilis, the venom of the viper, the dissecting-room poison, and most others, especially mineral and vegetable kinds, he would say that they acted on an element of the blood essential to health, if not to life, but which is constantly being supplied, just as in fermentation; if gluten were constantly added to the fermenting fluid, yeast would continue to be formed capable of inducing the same action in a fresh solution of sugar. Under this hypothesis it is easy to explain the extraordinary powers of the two poisons of small-pox and cow-pox, each reciprocally, in rendering the system incapable of carrying on the diseased actions peculiar to them. We have only to suppose them to act upon the same constituent of the blood, and to continue to appropriate every particle of it in reproducing themselves, as is the case with the yeast in fermentation, as long as any gluten remains in the saccharine solution; but if by any other means the gluten can be separated, the reproduction of yeast would immediately cease.

BLOOD IN THE BRAIN.—Mr. Crisp states, that he last year made a series of experiments, with a view of determining the condition of the brain in animals who had been bled to death. The result of these experiments was quite opposite to that which Dr. Kelly had stated to be the result of those experiments which he performed for a similar purpose. Dr. Kelly had found that the brain in his cases was always full of blood, while he (Mr. Crisp) on the contrary had found it to be bloodless; nor could he discover any corresponding quantity of serum to make up the deficiency. The animals he had experimented on were rabbits and dogs, and they had been killed by a division of the carotid artery. In the same kind of animals killed by poison and other means, the brain was found to present a very different appearance.

SULPHUR SPRINGS.—Deyeux, Fourcroy, and Longchamp, in their examinations of the sulphureous waters of Enghein, observed, that they acquired by heat a slight greenish tinge. Dr. Bennett is not aware that any satisfactory explanation of this occurrence has been given by these writers, but it appears to him probable, that the peculiar chlorine yellow colour of the waters of Harrowgate is owing to their containing a larger proportion of lime at one time than at another, and that during the process of heating the hydro-sulphuret of lime is formed, and being soluble at a low heat gives rise to this peculiarity of colour. "If we examine carefully," he says, "what takes place in these sulphur waters, when they are capable of producing the above peculiarities on the application of heat, we shall find, that, as the temperature rises, the azote and carbonic acid gas are the first to be given off, and the lime held by the latter in solution, as a bi-carbonate, rises to the surface, forming a delicate film of the carbonate of lime; in the progress of this alteration, the lime meets the sulphuretted hydrogen gas in solution, and forms an hydro-sulphuret of lime, which becomes soluble at a low heat, producing a clear yellow solution. As the heat rises, the hydro-sulphuret of lime becomes decomposed, the colour vanishes, the lime remains as a carbonate on the surface, and the sulphur at last precipitates. I selected some of the water of the Old Well, (at Harrowgate) which happened to be clear and free from the slightest tinge of colour of any kind; it was then heated gradually to 120 deg., the ordinary changes occurred, viz., extrication of the azote and carbonic acid gas, formation of the carbonate of lime on the surface, but without any change of colour whatsoever. I then took another portion of the

same water, collected at the same time, and added to eight ounces of it, two drops of pure lime-water—as the heat now began to rise, the colour of the water began to change; it appeared of a bright yellow colour at 100 deg., deep chlorine yellow at 148 deg., and return of the water to a perfect freedom of colour at 150 deg." This is presumptive evidence, that if a greater proportion of lime exists in the sulphur waters at one time than at another, this peculiarity of colour may become more evident by an increase in the temperature of the spring, and a larger portion of the hydro-sulphuret may be formed; and this fact suggests the mischief of the method hitherto adopted of heating the sulphur waters for internal administration.

FRACTURED CLAVICLE.—M. Recamier employs the following apparatus:—The bandage consists of a square cushion, completely distended with hay, so as to make a considerable projection, which he places between the two shoulders; to either side of this cushion a handkerchief, folded cravat shape, is fixed, the other end being carried over the shoulder, under the arm-pits, crossed over the back, and then tied on the chest. Before they are fastened together, the shoulders must be carefully carried back by an assistant. The patient is in no way inconvenienced by this bandage, which keeps the fracture reduced, whether lying or standing. The cushion appears like a hump on the back. He must carry his arm in a sling.

DELIRIUM TREMENS.—Dr. G. Budd remarks, what is characteristic of this disease, as characteristic as the trembling, is the loss of sleep. Patients all tell you that they have had no sleep for nights; and that the moment drowsiness comes over them, or even without this, at the approach of darkness, they are haunted by visions of the most frightful kind; they see serpents about the bed, and are pursued by devils of every size and shape. Well marked cases of delirium tremens are easily recognised; their characters are so striking, that taken with the previous history of the patient, they can scarcely be mistaken; but this is not the case with the slight degrees of the same affection. These are marked only by lowness of spirits, and inability to sleep; or by sleep which is interrupted by dreams. It is a condition which is familiar to many by the name of the "blue devils," which, in the majority of cases, certainly must be ascribed to excess in drinking. Men of jovial habits, who take what is called a cheerful glass, and enjoy company and good cheer, are remarkably subject to the blue devils; they are low and desponding in the morning, and their nights are sleepless, or their sleep is broken by dismal dreams. In delirium tremens the pulse, except after considerable muscular exertion, rarely exceeds its ordinary frequency; in cases in which it does, there is generally inflammation of some organ. The organs most frequently inflamed are the stomach and lungs; it is not uncommon to find a man, who, in addition to the ordinary symptoms—the delirium and trembling—has frequent vomiting, a furred tongue, and a quick pulse. Such symptoms indicate generally inflammation of the stomach, and are of bad augury; when they are present, the patient is unable to take solid nourishing food, which is a very important part of the treatment, and frequently indispensable for recovery. The lungs are much less frequently inflamed than the stomach. In none of the cases which I have examined after death, have I found any evidence of inflammation within the head, other than effusion of serum under the arachnoid. The symptoms do not depend on any inflammatory affection of the brain, but on exhaustion consequent on over excitement, and in part perhaps on the condition of the blood. The chief remedy

is opium; but it must be given in large doses, so as to procure sleep. When a man has been for days in a state of nervous agitation, and has had no rest for several successive nights, our object should be to procure sleep. The plan into which I settled for the treatment of delirium tremens, such as I used to meet with in sailors, is to give one drachm of tincture of opium every hour, for three or four successive hours, if the patient should not fall asleep before; and as soon as he awakes, to give him a mutton chop or some solid food. Large doses of opium sometimes fail in procuring sleep. In one case 3x were given in the course of 24 hours, without producing the slightest sign of narcotism; and it was only after the last dose that the patient fell asleep. The rule generally laid down in giving large doses of opium, is to discontinue the opium when the pupil becomes contracted. In many cases where opium had failed in composing the patient, I have seen admirable effects from wine and brandy, especially where the patient had left off drinking for several days.—Similar symptoms to delirium tremens may be caused by any great shock to the nervous system, especially by surgical operations, or severe injuries. When induced by this last cause it is called traumatic delirium. Dupuytren has also particularly remarked the state of the pulse. He says, "the most remarkable symptoms, in the midst of this disturbance of the intellect, is the calm of the circulation, and the absence of every febrile symptom. You see a patient furious; his face covered with sweat; his eyes glistening; his cries heard at a distance; you believe him affected with the most intense arachnitis. Approach him; his pulse is calm and regular, and the state of his skin removes every suspicion of inflammation." Opium is here the chief remedy. Dupuytren gave it in injections. He says that a dose of opium in this way has as much effect as three times the quantity given by the mouth.

THE LIQUOR CINCHONÆ FLAVA.—Mr. Roberts has used this medicine in many cases of neuralgia with the most beneficial results. He relates the case of a young hysterical female, about twenty-seven years of age, of spare habit, and unmarried, who received a blow on the breast which gave rise to much pain in that region. She applied to him a week afterwards. On examining the breast he could detect no inflammation; there was no redness or tenderness; her general health was good, her catamenia regular. A few leeches were placed over the affected part, and some aperient medicine was administered. This failed in affording relief to the pain. A mixture of decoction of aloes and infusion of gentian, and afterwards large doses of sesquioxide of iron, were employed without the least benefit. The liquor cinchonæ, in doses of eight minims gradually increased to twelve minims three times a day, was administered, and in three days the pain was entirely gone, and had not since returned, a week having elapsed. He believes that eight minims of it are equal to half a drachm of the powder of bark. It possesses advantages over quinine, as it retains all the properties of the bark, and is more stimulating and aromatic. Mr. Pilcher was consulted in a case in which the medicine in question was of marvellous efficacy, when all other remedies had failed. The subject of this case was a captain who had been many years at sea. When a boy he had met with a compound fracture of the leg, which had been badly set, and had remained in a weakened condition. Twenty years afterwards he fell into bad health in consequence of privations he had undergone on board ship, and was seized with a most severe pain in the neighbourhood of the fracture. He placed himself under the care of an intelligent surgeon, who thought the disease might be re-

moved by sea air, and recommended him to proceed on another voyage. This he did not consent to, and Mr. Pilcher was called to see him. He found his health very much deranged, the affected limb much weakened, and so painful, that he could only exist under the influence of almost poisonous doses of quinine and morphia. The liquor cinchonæ in five-minim doses was administered every two or three hours; in a short time the pain entirely ceased, the health became restored, and he went again to sea, only armed with a bottle of the liquor cinchonæ! It never affects the brain in the manner in which large doses of quinine occasionally do, and is altogether an excellent and elegant tonic.

CARBONATE OF AMMONIA IN FEVER.—Mr. Skerrett gives the carbonate of ammonia in all stages of fever, and has found it invariably to subdue the headache and moderate the pulse in strength and frequency. If fever consists in a disordered condition of the nervous system, and the vascular excitement be only a consequence of, and dependent thereon, he deemed himself justified, by previous observations, and has now applied his principles to practice in twenty instances. Should the ammonia disagree with the stomach, it may be combined with lemon-juice.

THE IODURET OF GOLD.—The proto-ioduret of gold is insoluble in cold or hot water, but is slowly, yet certainly decomposed by boiling water. Æther and alcohol exert a similar influence; hydriodic acid and the iodides of potassium and iron decompose it. The gold is precipitated, and new compounds, among which is an hitherto unknown per-ioduret of gold, are found in the menstruum, which assumes a deeper colour than it had before the experiment. Sugar also decomposes it, but gum arabic seems to exert a preservative influence; it should therefore be combined with it medicinally.—*Examin-Med.*

ARTIFICIAL PUPIL.—M. Guépin recently showed a medical society at Hantz, a patient on whom he had operated to produce an artificial pupil, after the cure of a severe case of staphyloma, which followed a severe contusion. The operation took place eight days before, yet the patient was able to distinguish clearly any object presented to him. M. Guépin cited two similar operations; and out of the three, two were perfectly successful.

THE CHIGOE OR GIGGER.—The "chigoe," or "chiego," of the West Indies, and the "pulex penetrans" of naturalists, consists, says Mr. Roberts, of Jersey, of two species, the *black* and the *white*, in the natural history of which there appears to be no difference. The habitation of the "gigger," as it is likewise called, is in stables, kitchens, and on the ground in the open air in dry weather, which is the season it mostly prevails in—that is, from December to July. It attaches itself to the feet of those who walk about bare-footed, and those whose occupations are in kitchens, abounding in ashes and other filth. Holes in boots or shoes render one liable to be attacked by them. Its intrusions are not confined to the human species, but it is found to attach itself to cats, dogs, sheep, and still more to pigs. It insinuates itself underneath the skin, and there deposits its eggs in a nidus of a tough gelatinous substance. Attention is first drawn to the presence of these insects by a gentle itching, which as the insect insinuates itself deeper, and the nidus begins to grow, becomes, in a few days, less tolerable. The nidus containing longish-shaped white gelatinous eggs, is a cyst of a tough membrane, and arrives sometimes to the size of a pea before the eggs are hatched, after which the new being likewise insinuates itself into the skin; so that in those who neglect extracting them,

there are clusters buried under the skin of the soles of the feet and toes, which raise it in little round eminences, and create irritable sores, oozing a serous fluid, and ultimately intractable ulcers—nay, the entire toe has been known to be lost by the creeping ulceration that is established. The *black* gigger differs so much in its effects from the *white*, which, it has been said, it otherwise resembles, as to be called the *poisonous* gigger, and produces much more malignant sores. The treatment for the removal of the chigoe consists in extraction by means of a needle—an operation dexterously performed by the negroes, and free from pain.

TYPHUS.—Professor Von Bischoff distinguishes four stages of typhus fever. In the first (intestinal stage), characterised by irritation of the mucous coat of the intestines, antiphlogistic remedies are indicated. Ipecacuanha, sal ammoniac in small doses, oleaginous emulsions (if diarrhoea exist), carbonate of potass, with lime-juice, small doses of tartar emetic, the liquor ammoniac acetatis, support the patient's strength and determine to the skin. If much headache be present, cold lotions, leeches, and sinapisms are necessary. In certain cases great benefit is derived from emetics in the first stage of the disease. In the second stage we must direct our chief attention to the intestines, and particularly to the ilium. The indications are to prevent ulceration and improve the condition of the blood. Cupping-glasses should be applied over the ileo-cæcal region, and counter-irritation afterwards kept up by the tartar emetic ointment. Blisters to the same part are also useful, and when the skin is dry and very hot, tepid baths may be employed with advantage. Of internal remedies, the most efficacious are solution of chlorine, ipecacuanha, dilute muriatic acid, Haller's elixer, arnica, and sulphate of quinine. The choice of remedy must be determined by individual circumstances. It is often necessary to combine the above mentioned substances with emollients. When the pulse is very quick and weak, the vital powers greatly depressed, and the skin dry and becoming cool, then valerian, arnica, camphor, and stimulants are requisite. In the third and fourth stages we must support the patient's strength by proper diet and the judicious employment of tonics. Small doses of calomel may be given with advantage to correct the abdominal secretions.

DIET OF FRUITS AND SACCHARINE FOOD.—Mr. Rowbottom, of Stockport, relates the case of a boy three years old, and covered from head to foot with ulcers. The whole head and face were involved in one complete mass of fetid running sores or ulcers. The anus and genitals were scarcely distinguishable, and almost black; it voided urine from five or six places; the fæces involuntarily dropped from it, when it always cried in the most pitiful manner. For twelve months it had never been able to sit down even upon a pillow. It had scarcely been able to lie in bed for the same period, from its head and face having run into one mass of ulceration. It had been perfectly blind for nearly twelve months. Its belly was enlarged and very hard. In September last the following diet was commenced:—In the morning it was supplied with stewed fruits, mixed with sugar or honey, for breakfast; the same to dinner, tea, and supper. It was forced to be eating grapes, cherries, plums, apples, pears, and such other fruits as could be obtained. A little ordinary food was now and then allowed. Under this treatment, when the new year came in, not an ulcer remained upon its body; the skin became clear and fair; and the features were restored to their wonted appearance.

URTICARIA TUBEROSA.—This affection has been successfully treated by M. Cazenave, at

the Hospital St. Louis with arsenic internally administered. The disease consists of round or elongated swellings, located in the dermis, about the size of a pigeon's egg, which are attended with pruritus, and followed by red patches, as if an effusion of blood had taken place. Fresh points of the eruption show themselves daily, the others gradually disappearing. Of the two cases narrated, one was attended with symptoms of a quotidian intermittent fever. Both cases were rapidly cured by arsenic, although the first had existed two years, and the latter four, before that remedy had been had recourse to. In the second case, benefit had been derived from the use of quinine, but it was not permanent. M. Demarquay thinks the arsenic acts as an anti-periodic.

SEMI-AMPUTATION OF THE UTERUS.—Dr. Grembler, of Neider Orschel, was summoned to an hysterical female, aged 53, who had long been subject to procidentia uteri. On his arrival, he found her icy cold, and exceedingly pale. He ascertained that she had just removed with a knife that portion of the uterus which projected beyond the vulva, and that considerable hæmorrhage had followed. He arrested the bleeding by the use of the plug and styptics, and of appropriate internal treatment. The portion removed comprised nearly half the organ, including the os tincæ. The patient got well, but her recovery was succeeded by hysteria and nymphomania.

HYDROPHOBIA.—Dr. Mojsisovics relates the case of a young man bitten by a dog. The wound was treated during ten weeks by a medical man, and belladonna administered internally, but symptoms of hydrophobia set in and he died. On examination of the body after death, softening of the brain and perforation of the œsophagus were discovered. Professor Berres mentioned some particulars connected with this case and derived from microscopic investigations. The blood had a dissolved appearance; its constituent parts were intimately mixed together; the serum was of a rose-red colour; the globules white, larger than is usual, gelatinous, and without any nuclei. The nerves were altogether softer than normal, and their texture, as it were, dissolved.

EMETICS IN CONFIRMED CROUP.—M. Marotte enforces the necessity of repeated and large doses of emetics, aided by local depletion, mild purgatives and blisters, in decided cases of croup. He agrees with Dr. Delaroque on the necessity of acting vigorously within the first two hours from the accession of the disease; he commences by applying leeches, and whilst the patient is in a state bordering on syncope, he gives large doses of emetics, and follows them up with a blister, all within an hour or an hour and a half. If the first administration of emetics only produces temporary relief, they are to be repeated every three, four, or five hours, until a decided benefit is obtained.

EXTRACT OF COPAIBA.—Dr. J. B. Thompson says, that this medicine is far preferable to the ordinary preparations of this medicine; it does not disagree with the stomach, nor is it followed, as the use of the other preparations of copaiba generally are, by a cutaneous rash—it can be given in form of pill, and hence does not irritate the fæces, and is less likely to be rejected by even the weakest stomach.

STRUCTURE OF THE SPLEEN.—According to M. Bourguery, the spleen is composed of two parts; one vascular, the other lymphatic. The vascular system is arranged in small cells; the lymphatic composed of very small glands, in such great numbers that, if collected together, they would form two-thirds of the organ. The glandules are united together by numerous lymphatic vessels.

IMPERFORATE HYMEN.—Mr. Arnott remarks, that under the head of imperforate hymen several morbid affections of the female organs of generation are not unfrequently confounded, simply because in all of them the vagina is obstructed. Imperforate hymen is not of frequent occurrence. On March the 24th, a girl of seventeen and three-quarters was admitted into the Middlesex Hospital; she was suffering great pain, with a distended and tense abdomen, tender on pressure. In examining this, a tumour was detected in the umbilical region, extending above it, solid, and somewhat moveable, and of the size of an orange. At first it gave the impression that it might be a collection of indurated fæces; but this idea was dispelled by the consideration that it was not in the ordinary situation of the large intestine. It then struck him that it was the uterus. The girl had never been unwell. By an ocular inspection the imperforate hymen was found distended and protruding in size and form like that of half an hen's egg, divided longitudinally, and placed lengthways between the entrance of the urethra in front and the perineum behind. The membrane so distended and stretched was red, smooth, and fleshy, and the swelling firm, but elastic to the touch. It was opened transversely and vertically; and as soon as the bistoury penetrated, the retained menstrual fluid spouted forth in a stream, and continued to flow freely till thirty-six ounces had escaped. Fifty ounces of fluid were discharged in the whole. This patient had subsequently not a bad symptom. On examination a fortnight after her admission, the opening was found almost closed. It was re-opened, and a bougie was afterwards occasionally passed.

MEDICAL NEWS.

THE FRENCH "CONCOURS."—With the view of giving our readers some idea of a French *Concours*, (since the term has been much used of late,) we insert the following translation from the *Echo du Monde Savant*:—"Concours, at the Naval Hospital, on Medicine at Toulon.—This medical solemnity was presided over by the Vice Admiral Baudin, Maritime Prefect, who had at his side the members of the Medical Jury. We also remarked there the Vice Admiral Hugon, Commander of the Mediterranean Squadron, the Rear-Admiral Ganthies, Major-General of the Navy, M. Ranson, Commissary General, the Commissary of the Naval Hospital, the medical men of all the civil and military hospitals of Toulon, the naval surgeons of all grades, all in uniform, and a crowd of persons belonging to different orders, members of the bar, and citizens. The justly merited reputation of the single candidate, and the brilliant recollections of his last *concours* at Brest, had attracted the curiosity of the public, and of the eminent persons whom M. Aubert, First Physician of the Navy and President of the Council of Health, had particularly invited. In the midst of this imposing assembly, M. Jules Ronn had to dissert, orally and without any preparation, on the sensation of sight, (the subject drawn by lot). It is not our part to discuss all the acquirements of which the candidate gave proof. Witness of the emotions that he caused to arise in his numerous audience, we would be wanting to justice if we did not declare that he worthily supported his brilliant reputation. It is long since a physician in our school has competed with such positive and extensive acquirements, such a fine imagination, and such a happy talent of speech. After this first trial, which endured an hour and a quarter, Admiral Baudin rose, and thus addressed the candidate:—"My

dear Doctor, I have heard you with the greatest pleasure, and I regret, for you and for science, that no other candidate has appeared to dispute the place with you."—Let any impartial mind compare the French mode of awarding professorships, hospital appointments, and such-like places, both purely scientific and medical, with the system of intrigue, nepotism, and interest, by which all such appointments are commonly obtained in this country.—*Gateshead Observer*.

MEETINGS FOR THE ENSUING WEEK.

MON. Botanic Gardens, Chelsea, 9 a.m.
— Medical Society of London, 8 p.m.
WED. Society of Arts, 8 p.m.
— Geological Society, half-past 8 p.m.
— Botanic Gardens, Regent's Park, 1 p.m.
THU. Zoological Society, 3 p.m.
— Royal Society, half-past 8 p.m.
FRID. Botanic Gardens, Chelsea, 9 a.m.
— Royal Institution, half-past 8 p.m.
— Botanical Society, 8 p.m.

ADVERTISEMENTS.

DR. BINNS ON SLEEP.

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THE MEDICAL TIMES.

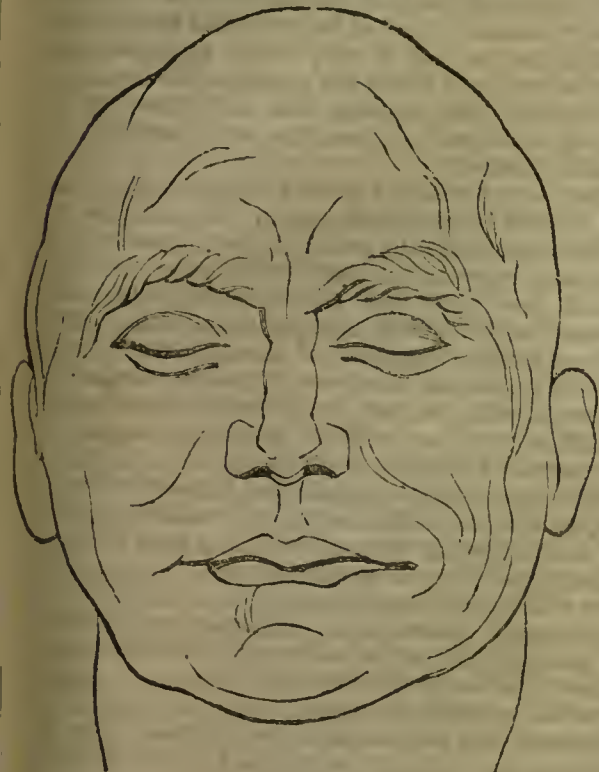
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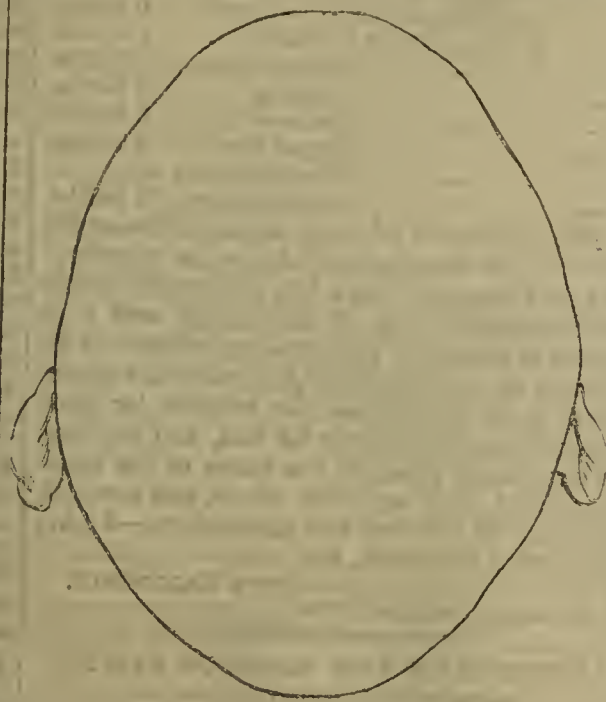
(Head tilted up.)

DR. ELLIOTSON ON THE PHRENOLOGICAL DEVELOPMENTS AND CHARACTER OF GOOD THE MURDERER.

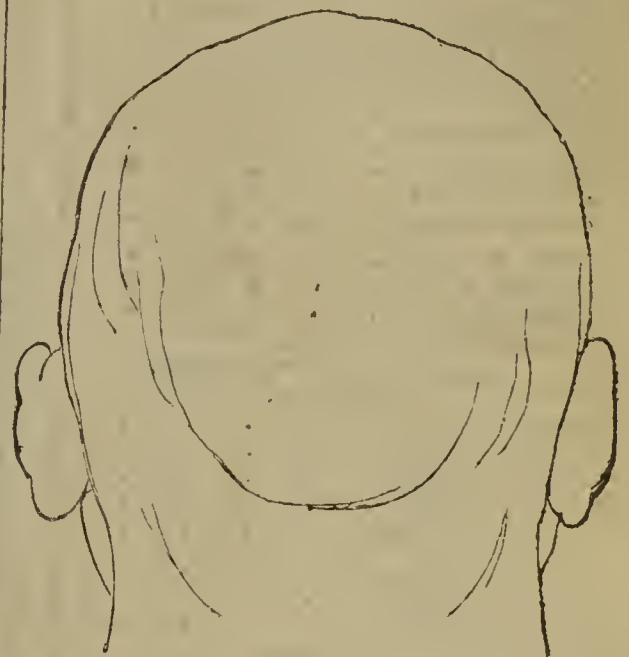
To the Editor of the 'Medical Times.'

SIR,—Having readily obtained the kind permission of the senior Sheriff to take a cast of the head of Good, the lately executed criminal, I sent a very able workman, named Casci, residing at No. 3, Harford-buildings, Drury-lane, for that purpose. Mr. Casci is at liberty to sell copies of the cast to any person, and I believe they may be obtained either at his house, or that of his master, Brucciani, Little Russell-street, Drury-lane. I was not present when the cast was taken: but, while the head was being shaved, I pointed out its bad development, remarking that the sides of the head, at covetiveness, destructiveness, and cunning, were coming into view of very large size.

Of Good's guilt there can be no doubt. His promise of the victim's clothes so long before hand to another woman, his inability after his condemnation to direct to the match-man of whom he spoke, tell powerfully against him. The chaplain of the prison repeatedly asked him, after his condemnation, why, if he was innocent, he did not say he was a murdered man, since he would be fully justified in such a declaration? But this he could never be brought to say. When he lived at Clapham he once set fire to the bed in which his wife lay ill in order to terrify her. I have heard proofs of his being a passionate man. His facility of lying was evinced by his assurance to the excellent governor of Newgate, who fancied he recognised him, that he had never been in prison before under another name, though he had been there under the name of Sullivan, convicted of a robbery. He had been twice convicted of robbery; once of articles from the boot of a public coach; once of articles which he seized from the hall of a gentleman's house, while waiting with his carriage for his master's family who were there at an evening party. He took the opportunity, when no servant was in the hall, of making a dash at coats, cloaks, and a shawl worth 40 guineas, all which he deposited in the carriage.



He was sentenced to transportation; but a gentleman with whom he had lived, and whom he had waited upon most attentively in an infectious disease, when every other servant feared to approach the gentleman, pleaded for him, and he was sent to the Penitentiary. During the last fire but one which broke out in that building, he was so useful that his sentence was remitted, and he was set at liberty. In Newgate his conduct was always gentle and respectful; whatever was wished of him he did; no prisoner ever gave less trouble. His conduct to his superiors seems always to have been very respectful and obliging. His strong desire of approbation and notice was also shown in his speeches to the sheriff, chaplain, and governor, during their last interview with him; in the letters he dictated full of civil things to various persons; and in his attempt to address the crowd while the cap was putting over his face; in his rising at the end of the service on the preceding day, and raising his arms and God-blessing the congregation, just as he God-blessed the audience at the close of his trial; and in his unexpected speech in his own defence after his counsel had concluded. After his condemnation, he was constantly expressing a hope that on the day of his execution it would be a fine morning. He was anxious not to wear the prison clothes, especially at the time of the condemned sermon and his execution; and on the last morning he carefully spread the ends of his white cravat over his blue checked shirt in order to conceal it. Of his sexual propensity we have sufficient proof. He confessed to having been a very bad man. He heard his sentence unmoved. His firmness of the denial of murder did not forsake him even at the last. His protestations of innocence of blood—guiltiness were strenuous. He could put up with a bad character in other respects, provided he was not regarded as a murderer. He was passionately fond of his son. At the last interview the boy was unwilling to approach him and shake hands with him, but Good violently embraced the boy; made him sit down and read a psalm to him, being himself unable to either read or write; and, on the child leaving him, fell upon his knees and prayed for him, and looked after him at the door of the cell as long as he was in



sight. Of his caution and cunning we have abundant proofs. His want of intellect appeared in every thing. Cunning enough he was, but he evidently had a miserable understanding. His idea that his protestations of innocence would be believed; that his flatteries would be valued; that his displays for notice would redound to his credit; his constant desire that the morning of execution would be fine; in short, his whole conduct prove him to have been deficient in intellect, though full of cunning.

His head is in strict accordance with Gall's discoveries. It is a head of very limited understanding and moral feelings, and intense animal feelings.

The portion devoted to *intellect* is very small, exceedingly *narrow*. The breadth steadily augments in a striking manner from the sides of the forehead to the parts above the ear. We have only to place a pair of compasses above the ears, where Destructiveness and Cunning lie, and then bring them forwards, to see the great difference. The breadth of the forehead is $4\frac{1}{2}$ inches, but the part over the ears is more than 6 inches. This, and the parts of the sides above, together with the back of the head, corresponding to portions of the brain in which reside the feelings equally supplied to brutes as to man, are of great size. A considerable portion of the crown of the head, where the higher moral feelings are placed, is narrow, and slopes off at the sides, as it usually does in unscrupulous persons. The organ which gives refinement of feeling, called in England *Ideality*, is, as in other low criminals, very small. The whole head is rather small, being but 22 inches in circumference; and its circumference would not have been so great, but that the organ of Parental Love is of unusual magnitude. Courvoisier's cast was above 23 inches in circumference. But for the great preponderance of the feelings in which the brute is equal to man, over the intellectual and higher moral faculties, the head would have been exceedingly small.

If, as in my pamphlet on Courvoisier, published by Highley, Fleet Street, we signify *mean* development by the figure 3; *large* by the figure 4; *very large* by 5; *small* by 2; and *very small* by 1; the relative development will stand thus:—

FEELINGS.	
Parental Love, (Philoprogenitiveness)	5
Cautiousness	5
Cunning, (Secretiveness)	5
Disposition to do violence, (Destructiveness)	5
Love of Notice, (Love of Approbation)	5
Sexual Love, (Amativeness)	4
Friendly Love, (Adhesiveness)	4
Firmness	4
Disposition to Feed, (Alimentiveness) ?	4
Love of Property, (Acquisitiveness)	4
Courage, (Combativeness)	4
Veneration	4
Conscientiousness ?	4
Benevolence	3
Self-Estimation	3
Constructiveness	3
Hope ?	2
Wonder ?	2
Imitation	2
Poetic Feeling, (Ideality)	2

INTELLECTUAL FACULTIES.

Inferior.

Sense of Things	3
— Persons, (Form)	3
— Locality	3
— Music	3
— Language	3
— Order ?	2
— Color	2
— Time ?	2

Superior.

Comparison	3
Causality	2
Wit	2

Thus Good possessed 12 feelings, each, except Veneration, as strong in the brute as in man, of the force of 5 and 4; while the higher feelings were all only as 3 and 2. None of his intellectual faculties exceeded 3: those which reached 3 were, with one exception, the inferior intellectual faculties, one or more of which is often strong in very unintellectual persons; and the majority of the superior intellectual faculties were but as 2.

I may remark, first, that of the organs marked 5, Parental Love is the largest. (A friend has suggested that Good might have left his wife for Jones with the hope of children, and wished to exchange Jones for Butcher from finding her unlikely to become a mother again.) Secondly, that, although Sexual Love is marked 4, it is the largest among those marked 4, and, but for the great size of Parental Love and Cautiousness, would have been placed in the first class. Thirdly, that poetic feeling is the smallest among those which are marked 2. Fourthly, that those organs to which a query is appended are not universally admitted by phrenologists, and form no part of Gall's system. Of the organs of Hope and Conscientiousness, I have the greatest doubts. Those persons who have the summit in general of their head shaped like a penthouse or keel have little conscience; but the subdivisions of the sides of the summit into organs of Conscientiousness and Hope, are, to my mind, far from substantiated; and the size of Dr. Spurzheim's organ of Conscientiousness in Good is only one of numerous facts contradictory to its truth. Fifthly, that strength of the organ of Veneration may have nothing to do with religion; but Good's conduct to all his superiors on all occasions, showed, I think, the force of the feeling in him.

The measurements are as follows:—

Circumference of the whole head, passing immediately above the eyes	22 inches.
Line drawn from ear to ear forwards	10 6-8ths.
— — — — — backwards	11 2-8ths.
— — — — — over the head	11
— — — — — the meatus auditorius, to	
— — — — — Firmness	5 6-8ths.
— — — — — Veneration	5 5-8ths.

— — — — — Benevolence	5 6-8ths.
— — — — — Sense of Things	5 2-8ths.
— — — — — Comparison	5 4-8ths.
— — — — — Pride	5 4-8ths.
— — — — — Parental Love	5
— — — — — Inhabitiveness	5 2-8ths.
Breadth at the outer extremities of the orbits	4 1-8th.
— — — — — immediately above the ears, (at the Disposition to Violence)	6 1-8th.
— — — — — at the centre of Causality	1 6-8ths.
— — — — — Sense of Property	5 6-8ths.
— — — — — Cunning	6 2-8ths.
— — — — — Courage	5 2-8ths.
— — — — — Sexual Love	2 7-8ths.
— — — — — Circumspection	6
— — — — — Poetic Feeling	4 2-8ths.

The occurrence of such organizations as the present, the head being "*shapen* in iniquity," and thus the man "not a law to himself," shows the imperative duty of the middle and high classes of society to provide sound education for all, and to set examples of rational and virtuous lives, so as to increase the motives for good conduct and lessen those for bad, and improve, as is certainly possible, the shape of the head. At present their opinions, views, and conduct, fall very far short of real civilization.—I have the honour to remain, &c.

JOHN ELLIOTSON.

37, Conduit Street, May 31, 1842.

LECTURES ON THE NERVOUS SYSTEM.

By PROFESSOR OWEN, F.R.S., &c., &c.

THE lecturer commenced with a brief recapitulation of the microscopic characters of the nervous system. Subsequent observations have confirmed the discovery of Ehrenberg of the difference in the primitive fibres of the ordinary nerves, as compared with those of sight, hearing, and smell, the soft nerves of the ancients, and of the cerebro-spinal axis. These latest observations, however, have proved that the beaded or varicose character of the minute primitive fibres of the brain, spinal cord, olfactory, optic, and acoustic nerves, is the result of accidental pressure, which, nevertheless, from the greater resistance offered by the larger primitive fibres of the rest of the nervous system, becomes a most useful discriminating character. With regard to the structure of ganglia, this has been most clearly made known in the abdominal ganglia in the inferior animals. Thus, in the leech the abdominal ganglion presents eight fasciculi of primitive filaments arranged in a plexiform manner around claviform, nucleated cells, and converge in pairs into the abdominal columns, and the transverse nervous branches. The slender terminations of the clavate ganglions are continued in the diverging fasciculi. The clubbed end of the ganglion, besides its nucleus, contains many smaller globules.

Va'entin confirmed the observation of Ehrenberg on the abdominal ganglions of the leech. Purkinje has observed similar cordate ganglionic bodies in the grey substance beneath the cortical and medullary part of the cerebellum. Müller has found these clavate ganglions in the medulla oblongata of the lamprey, in which the clubbed end is dentated or knotted.

The filaments of the cellular tissue of the ganglions and chords of the sympathetic nerve seem to have been mistaken for a peculiar class of nervous filaments called 'grey' or 'organic.'

The grey, or cortical substance of the cerebro-spinal axis is distinguishable by its rich supply of capillaries, and its quantity of nucleated cells. The primitive fibre of the nervous tissue has a compound structure. Its external denser part forms the white substance of Schwann; its central portion the band-like axis of Remak. In both parts, Dr. Barry has detected his primitive filament, the structure being analogous to that which is developed in the blood disc itself. The chief difference in the structure of the nerves of the higher and lower animals seems to consist in this—that the constituent filaments are not aggregated so definitely into distinct fibres in the lower species. This, therefore, renders the detection of the nerves in the acalaphæ and zoophytes considerably more

difficult. But the fact of such modifications in the structure of nerve renders more credible the belief, that in the simplest, even in that of the acrite animalcules, internunciate chords of disgregated primitive transparent filaments may be so arranged as to convey impressions, and preserve consent of action throughout the frame. The primitive filament of the nervous tissue, although itself a complex body, according to the observation of Barry, closely resembles that of the muscular fibre of the cellular tissues. It is only when aggregated in the distinct form which the primitive fibre assumes in the nerves and muscles, that such fibre can be clearly distinguished from the corresponding one of other tissues.

But in regard to the animal kingdom in general, it must be confessed, that in the present state of our knowledge the nerves do not appear to possess any very distinct microscopic characters. It is not wonderful that they were originally confounded with tendons, ligaments, and other white fibrous parts. Examples of the difficulty of this discrimination are even now frequently occurring. Whoever will compare Dr. Hanover's description and figures of the plexiform, muscular structure of the uterus in Müller's Archives, with Dr. Lee's elaborate figures and descriptions of the nerves of that organ, will find a striking example of the difficulty of discriminating the nervous tissues even in parts which are far from being microscopical. The observation which Mr. Swan, the most conscientious and industrious of neurotomists, makes on the difficulty of pronouncing on the exact nature of the transparent gelatinous filaments which appear to compose the sympathetic nerve, ought to teach us to approach this subject with due caution. Nevertheless, the confirmation which Cuvier's description of the nervous system in the star-fish and holothuria, has received by the concurrent observations of later anatomists, permits no doubt as to the simple type or disposition of the nervous system in those radiated animals. It consists essentially of a series of minute ganglia, connected together by a ring of nervous matter surrounding the œsophagus, and radiating nerves to each ray or corresponding division of the body. This is the first, or fundamental type of the nervous system.

The second type consists of a small ring of nervous matter connecting a ganglionic mass *above*, with a similar mass *below* the mouth from which nerves are dispersed to ampler ganglions, disposed, often unsymmetrically, in distant parts of the body. This hetero-ganglionic type of the nervous system characterizes the moluscons division of the animal kingdom.

The third type presents the œsophageal ring with the superior and inferior ganglionic masses, from the latter of which two chords are continued along the vertebral aspect of the body, associating more or fewer ganglionic masses which are symmetrically arranged. This homo-ganglionic type of the nervous system characterizes the articulated sub-kingdom of animals.

The fourth and highest type of the nervous system exhibits an aggregation of the nervous matter in form of a cerebro-spinal axis placed upon the dorsal aspect of the body above the mouth, and defended by a skull and vertebral column. This has been termed the *kyleucephalous* type, and characterizes the vertebrated sub-kingdom of animals.

In addition to these types, or arrangements of the nervous system, distinct parts or sub-divisions of that system, in both the moluscons and articulate classes, are appropriated to the respiratory and digestive organs. These correspond with the sympathetic system of nerves in the Vertebrata, and with the respiratory, which in the Vertebrata are more especially connected with the cerebral centre of the ordinary nervous axis.

In commencing the study of the arrangement, or anatomical conditions of the nervous system in the simplest animals, we find that physiologists and comparative anatomists have entertained a very great difference of opinion. By some, the nerves, as such, have been denied in the lower class of zoophytes; by others, as Oken, these animals have been regarded as consisting exclusively of nervous tissue, although, indeed, under its lowest conditions. The discovery of distinct localized organs of sense, as the eye-speck of the simplest and

minutest infusoria, and the indications thus afforded of the definite development of the nervous system being associated with corresponding distinct conditions of the digestive, locomotive, and generative organs in animalcules, which, under less careful observation, present only the appearance of homogeneous jelly, afford us the best grounds for the conviction that these distinct nervous filaments, which have been detected in larger gelatinous Radiata, have likewise their existence in even the minutest forms which exhibit unequivocally the phenomena of animal life. The detached ganglions and fibres at the base of the actinia, described by Spix as its nervous system, belong to the ordinary fibrous tissue. In the larger species of this gigantic polyp, a white cord surrounding the mouth is distinctly perceptible, and it seems highly probable that this forms the central and main part of its nervous system. The marginal chord of the Medusæ and Beroë were described, and the figures by Ehrenberg and Milne Edwards, of the evidence of the nervous system existing in these aculephæ were shown. From the soft white tincture of nervous matter surrounding the œsophagus of the star-fish, and juxtaposed to the filaments diverging along each ray, smaller filaments are given off from the œsophageal ganglions to the adjoining parts. Cuvier's account of the nervous system in the holothuria, has been confirmed by Tiedemann, and more minutely described by Dr. Krohn. The œsophageal nervous circle in the holothuria is applied against the inner side of the calcareous ring; it sends flattened fibres along the interspace of each of the fibres of longitudinal muscles. They run external to the vascular trunks, and are closely applied to the transverse muscular fibres. They distribute lateral filamentous nerves with the vascular branches sent to the suckers. It is necessary to detach carefully the longitudinal muscles and vascular trunk, in order to demonstrate the nerves. In some species, as the holothuria triquetra, they are of a red colour. In the echinus, or sea urchin, the œsophageal nervous cincture presents a pentagonal form. It lies between the salivary cul-de-sac and the apices of the calcareous pyramids which support the teeth. All the muscles of mastication must be removed to expose it. The primitive nervous branches present a flattened form, and accompany the vascular trunk, which may be distinguished by their alternate lateral appendages. In the spatangus, the nervous cincture forms an inequilateral pentagon around the reniform mouth, whilst the vascular cincture is an ellipse. The nervous trunks radiate in a manner similar to the echinus. Further evidence of the nervous system of the echinoderms is afforded by the bright red eyespecks near the termination of each ray. This is associated, according to Ehrenberg, with a minute ganglionic enlargement. It is protected by a fence of converging spines. Mr. Forbes thought he had observed the star-fish to take cognizance of food placed at a little distance.

The chord-like form of the brain in almost the highest moluscous animals, as, for example, in the nautilus, may well lead us to suppose that the nervous circle around the mouth may be a sufficiently adequate centre for the appreciation of sensation, and the origination of some voluntary impulse, as well as for the automatic reception and reflexion of stimuli in these radiated animals.

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Henry Sutton Lyford; Stephen Orton Lane; Thomas Bernard Ryan; Thomas Esmond White; Thomas Upton Nutt; John Simpson Rutter; George Senior; Edmonds Robert Richardson; William Marwood Kelly; John Broadhurst; Richard Tomkinson.

COURSE OF CLINICAL LECTURES ON PNEUMONIA.

Delivered at the Hospital La Charité, by Professor CHOMEL.

LECTURE XVIII.

A. Local Complications. 1. Traumatic Pneumonia.—Before commencing the examination of the local complications of a strictly medical nature, I will say a few words of the pneumonia which is developed after wounds of the lung. Traumatic pneumonia, which I have often seen referred to but never described by authors, presents probably the characters common to this kind of disease; but it must often happen, in consequence of the lesion of a greater or less number of the thoracic muscles, and of the acute pain thus caused, which opposes the free exercise of the respiration as well as the cough and expectoration, that several of the functional symptoms of pneumonia are either absent or obscure; I may also add, that the effusion of blood, which in these cases often takes place into the pleura must, in a great measure, mask and even totally destroy the phenomena derived from auscultation. I am therefore inclined to believe, that the diagnosis of this form of pneumonia is more frequently founded on the existence of the penetrating wound, and of the inflammatory lesions which are its necessary consequence, than upon any signs proper to inflammation of this organ. Wounds of the lung being, also, frequently accompanied by emphysema of this viscus as well as by that of the thoracic parietes, or at least by hæmorrhage into the air-passages, there will be great difficulty in discovering the various bruits and the dulness peculiar to pneumonia.

2. Pneumonia complicated with Sanguineous Pulmonary Congestion.—The sanguineous pulmonary congestion which is often complicated with pneumonia, is *active* or *passive*, the combination of this state with inflammation constituting what is denominated *hypostatic pneumonia*. M. Piorry describes this disease in the following manner: in hypostatic pneumonia, occurring in individuals weakened by age or by disease, and after a long continuance in bed, we find, without any precursory symptoms, a slight dulness manifest itself on the posterior region of the thorax at a point corresponding to that upon which the body rests; this obscurity of sound is most marked inferiorly; when the patient is lying on his back, the parts which are still sound appear to be distinctly separated from the diseased portions; the transition in the lung from the normal state to that of disease is not made abruptly, but by insensible shades; this transition does not take place at the points corresponding to the fissures dividing the lung into lobes and lobules. In this form of pneumonia, there is no crepitant râle at the commencement, but only a diminution in the respiratory murmur; we afterwards find râles of various characters with bronchophony, but the dulness is at the same time augmented, especially in the inferior parts. Most frequently there is no expectoration nor pain in the side; the difficulty in the respiration becomes gradually augmented, and towards the termination of the disease, we find a mucous râle in the bronchi, which is followed by asphyxia. The difference in symptoms between hypostatic and ordinary pneumonia may be readily perceived; but undoubtedly it sometimes passes, by insensible shades, from one form to the other, and it is only in extreme cases that this difference becomes well marked.

3. Pneumonia complicated with Pleurisy.—A certain degree of pleurisy almost constantly accompanies pneumonia; as long as this inflammation remains confined to the portions of the pleura corresponding to those of the inflamed lung, it does not give rise to any remarkable effusion, because the pulmonary parenchyma, augmented in volume and density, does not permit the liquid to accumulate between the two layers of the pleura which are compressed together. In this case, the pleurisy modifies but feebly the characters of the pneumonia, and may be easily overlooked where the attention is directed towards the lung. But the case is different where the inflammation attacks a more extended portion of the pleura, or the whole of this membrane, when a considerable effusion takes place, or false membranes become formed of a greater or

less thickness; we then find the supervention of important modifications in the symptoms of one or both affections, and a true complication is formed. The combination of pneumonia and pleurisy may present several forms. And first, as to the *period* at which pleurisy manifests itself, sometimes the pleurisy and pneumonia commence and progress together; sometimes the pneumonia precedes the pleurisy; at other times the contrary takes place, and the pneumonia is developed during the course of the pleurisy, or at the period of its resolution. With regard to the *seat* of these two affections in effusion as in pneumonia we most commonly find the inferior part affected; sometimes the effusion occupies the inferior portion and the pneumonia the summit; the contrary may take place; or else, by reason of the various adhesions, the effusion may correspond to each of the regions of the lung, and the pneumonia offer its distinct characters in some other region. At other times, again, the effusion occupies one side of the thorax, and the pneumonia the opposite one. I shall dwell only on the principal of these cases.

1st. One of the most interesting forms to study by reason of the error to which it might lead, is that in which effusion supervenes in proportion as the resolution of the pneumonia takes place, a resolution which the effusion appears to favour. In this case the crepitation diminishes and then disappears; bronchial respiration, resonance of the voice, and dulness on percussion, become developed, and one might easily mistake these symptoms for those of the passage of pneumonia from its first to its second stage, an error which would greatly modify the prognosis and treatment of the affection. But the usually œgophonic resonance of the voice, the possibility, especially, of changing the situation of the dulness by varying the position of the patient, perhaps even the appearance posteriorly of the crepitant râle on making the individual lie on his abdomen, the consecutive dilatation of the affected side, as well as the comparatively slight intensity of the general symptoms and of the disturbance of the respiration, would enable the attentive physician to discover the succession of the two diseases.

2ndly. At other times we find the reverse take place; the pneumonia increases or becomes developed according as the effusion is re-absorbed. In these cases the bronchial respiration, œgophony, and moveable dulness are succeeded by a crepitation, which sometimes becomes more and more superficial, and ultimately, by bronchial respiration, bronchophony and dulness of a fixed character. When pneumonia is complicated with a more or less considerable pleuritic effusion, the characters of the latter affection may be easily recognised; but it is far different with those of the pneumonia; the difficulty will also be greater from the new position into which the lung is forced by the effused fluid.

3rdly. Pneumonia and effusion frequently occupy the same region, particularly the base of the thorax; but then the effusion is almost always moderate. We find in the lower part of the thorax a very marked dulness, with bronchial respiration and usually a degree of œgophony; also, on causing the patient to cough, and immediately afterwards to draw a deep and rapid inspiration, we sometimes very clearly distinguish the crepitant râle; this sign, combined with the nature of the sputa, would leave no doubt as to the combination of pleurisy with pneumonia. We should also, in a case of this kind, make the patient lie on his abdomen, and we should then very probably find the crepitant râle appear behind, or else the œgophony will become converted into bronchophony. In an instance of this description, which came under my care not long since, crepitation ceased to be perceptible for some days, and then reappeared with the absorption of the pleuritic effusion; it was, however, heard only during the inspirations succeeding the cough. When inflammation has attacked a large surface of the lung, at the same time that adhesive bands are formed upon the surface of the pleura, the motion of the lung becoming destroyed, these false membranes cannot produce their ordinary *bruit de frottement*. But this bruit will appear if resolution of the pneumonia precede that of the pleurisy, it will remain absent if the

pleurisy disappear first. We see, then, that the appearance of the pleuritic *frottement* will announce the resolution of pneumonia. If the pneumonia be developed in an individual already affected with pleurisy, attended with adhesions and the *bruit de frottement*, this bruit will become diminished and shortly disappear.

4thly. At other times the effusion occupies one portion of the chest and the pneumonia another; the most common case is that where the effusion corresponds to the base, and pneumonia to the summit. An inverse arrangement may however exist; a pleuritic effusion may be circumscribed and maintained by adhesions to the summit of the chest, while the inferior part of the lung is attacked by inflammation. I have not myself met with any case presenting such a combination of these two affections, but M. Andral mentions a remarkable instance in which the left pleura was divided by adhesions into two cavities; the one, superior, extended from the first to the fifth or sixth rib, and was filled with a limpid and colourless fluid, which had pressed the superior lobe of the lung towards the mediastinum. If the base of the organ had been attacked by inflammation, we should have had the combination previously spoken of.

5thly. In some cases of considerable effusion, the lung, instead of being pressed inwards towards the spine, may be pushed directly outwards, so as to be applied against the thoracic parietes. Inflammation of the pulmonary parenchyma might here be easily diagnosed; nor would there be much difficulty in recognising the presence of the effusion.

6thly. Both lungs being considered as forming but single apparatus, the one organ may be attacked by inflammation, whilst the other, compressed by a pleuritic effusion, is rendered totally unfit for respiration. This is not a rare occurrence, where one lung is obliged to carry on the function of respiration; in this case such a state of activity is induced in the organ, that it thence becomes exposed to inflammation. The principal interest presented by this form of disease, is with regard to the prognosis of the malady; its diagnosis is easy enough.

7thly. Pneumonia and pleurisy offer still further complications, when for instance pleurisy is accompanied only by the formation of false membranes and adhesions without effusion. The lung may then present various conditions. For example, partial and scattered adhesions may unite this organ to the thoracic parietes in various points; should inflammation then attack the organ, the crepitation will be disseminated, and will correspond to the points of its surface which remain moveable and free. A second condition, several examples of which are recorded at the present day, is that in which false membranes of old formation and of greater or less thickness cover over, wholly or in part, a recently inflamed lung. Percussion and auscultation then furnish but very doubtful signs, unless crepitation be distinguished in some portion of the lung which is situated near to the thoracic parietes, and is less encompassed than the rest of the organ. A case of this kind, reported in the *Clinical Practice of M. Cazol*, in 1829, will be read with interest.—(*Thèse*, 1831.)

Pneumonia complicated with pneumo-thorax.—Can pneumo-thorax from simple exhalation and without perforation of the lung, (the only kind with which I shall here occupy your attention,) supervene in the course of common pleuro-pneumonia? The only observation of this kind, with which I am acquainted, is the following, related by Dr. Graves:—A man, 40 years of age, well-formed, and having a large chest, had enjoyed good health till affected with intense pneumonia of a well-marked character. On the third day, the inferior part of the right side of the thorax gave a dull sound on percussion, whilst the superior part of the same side resounded as well as the corresponding region of the sound side. On the morning of the fourth day, a remarkable change had taken place, the dullness continued at the inferior and anterior part of the right side of the thorax; but extending from a little below the right breast up to the clavicle, that is to say, over the region where, on the preceding day, percussion elicited its normal characters, a sound preternaturally clear and sonorous was discovered. The

respiratory bruit was no longer perceptible in this part, so that the lung seemed pressed backwards by the air effused into the cavity of the pleura. The left lung performed its functions with increased energy. At the end of six hours, the normal sonorousness gave place to complete dullness; and a very obscure respiratory murmur mixed with slight crepitation was perceived in this region. This crepitation was evidently situated very close to the ear, showing that the air effused so quickly had been absorbed with equal rapidity.

The progress of this complication, the rapidity with which it was developed and disappeared, as well as the excellent health which the patient had previously enjoyed, must make us reject the idea of pneumo-thorax with perforation. But I may add, that the Doctor has made no mention of metallic tinkling, nor of the amphoric souffle. A spontaneous exhalation of gas from the inflamed pleura may, however, have been the sole cause of the pneumo-thorax in this case, which, it must be allowed, is a fact of extremely rare occurrence.

Pneumonia complicated with bronchitis.—A certain degree of bronchitis almost always accompanies pneumonia; but this is a circumstance of little importance, in no way modifying the diagnosis, the prognosis, or the treatment of the disease. It is, however, different when the bronchitis is of an intense or extended character; this combination then presents itself under several forms.

1st. Sometimes bronchitis and pneumonia exist simultaneously, and in this case the symptoms of the bronchitis usually predominate, whilst those of the pneumonia become vague and obscure. This happens more especially when the pneumonia affects the base of the organ, inasmuch as the mucous, sub-crepitant, and sibilant râles of bronchitis are most constant as well as most intense over this region. In cases of this kind, auscultation requires the greatest attention; it should be repeated frequently during the same day, and we should endeavour to make use of those moments when the symptoms of the bronchitis are least intense, and thus unmask the characters of the pneumonia. I may add, that it will be almost useless to seek the crepitant râle of pneumonia on the lower and posterior parts of the chest, till the patient shall have remained some time in the sitting posture, for it has been noticed that dorsal decubitus remarkably increases the mucous and subcrepitant râles of bronchitis in this region. Another circumstance which contributes in this case to obscure the diagnosis of the pneumonia, is that the characteristic sputa of this affection are notably altered by their admixture with the expectoration of bronchitis; but most commonly we may perceive here and there, in the midst of the abundant mucous sputa, some small masses having a greater viscosity, and which are of a slightly yellow or reddish colour.

2nd. At other times the pneumonia does not supervene till some days after the invasion of the bronchitis; it is not then announced by well-marked signs at its commencement, but we find an increase of fever and difficulty of breathing; the sputa are still those of bronchitis, although more viscons than they were before; and one would probably suspect only the existence of acute catarrh, when the pulmonary parenchyma had already become attacked by the inflammation for a greater or less extent. So grave an error will be easily avoided by carefully auscultating the patient; we find, in fact, that the mucous râle becomes finer, less humid, more regular, and gradually gives place to the crepitant râle; the sputa also quickly become rusty-coloured. In general, when in the course of bronchitis we find the respiration become more constricted, a greater development of the febrile movement and a remarkable alteration in the countenance, we should suspect the extension of the inflammation to the pulmonary parenchyma, although percussion, auscultation, and the expectoration may offer nothing characteristic. In this case, we should not neglect to employ a vigorous antiphlogistic treatment, especially if the respiratory bruit become puerile, and if the blood present the inflammatory buff. In some cases, a slight pneumonia may arise in the course of bronchitis and is then announced only by some rusty-coloured sputa.

Lastly, there are cases where, towards the decline of the pneumonia, there gradually appear symptoms of bronchitis; but this succession of diseases may be easily recognised.

THE PHYSIOLOGY OF ANIMAL SUSTENANCE.

A RECENT case of prolonged abstinence is that of the Indian Fakir. The first account of him published in England was by Lieut. Boileau, of the Engineers. The man, it would appear, had acquired the art of suppressing his breath—in other words, he seems, supposing we credit the accounts given of him, to have possessed the power of checking and renewing the phenomena of life at pleasure—or, in plain language, dying* and coming to life again. We are told that he made several days' preparation by abstaining from solid food, so that he might not be inconvenienced by the contents of his stomach. He was then sewn up in a narrow bag of cloth, and the cell in which he was to be laid or buried was lined with masonry, and floored with cloth, to prevent the attacks of the white ants and other insects. "The place in which he was buried at Jaisulmer," says Lieut. Boileau, "is a small building about twelve feet by eight, built of stone; and in the floor was a hole about three feet long, two and a half feet wide, and the same depth, or perhaps a yard deep, in which he was placed in a sitting posture sewed up in his shroud, with his feet turned inwards towards the stomach, and his hands also pointed inwards to the chest. Two heavy slabs of stone, five or six feet long, several inches thick, and broad enough to cover the mouth of the grave, so that he could not escape, were then placed over him, and I believe a little earth was plastered over the whole, so as to make the surface of the grave smooth and compact. The door of the house was also built up, and people placed outside, that no tricks might be played, nor deception practised. At the expiration of a full month, the walling of the door was broken, and the buried man dug out of the grave."

He was taken out in a perfectly senseless state, his eyes closed, his hands cramped and powerless, his stomach shrunk very much, and his teeth jammed so fast together that they were forced to open his mouth with an iron instrument to pour a little water down his throat. He gradually recovered his senses and the use of his limbs; and when we went to see him he was sitting up supported by two men, and conversed with us in a low, gentle tone of voice, saying that we might bury him again for a twelve-month if we pleased."

His powers of abstinence, even on ordinary occasions, were manifestly great, for Cornet Macnaghten suspended him for *thirteen days*, shut up in a wooden box without food or drink. It is said that during the time he was accustomed to be buried, his hair ceased to grow. Surely there must be some mistake here—for the hair and beard even of corpses grow, as we have seen manifested, not only on the dissecting-table, but in the persons of the Egyptian mummies. In a late work,† an attempt is made to throw not only doubt, but discredit on the recital of Lieut. Boileau, but, we think, very unfairly. The author's reasons for disbelieving the powers of the Fakir are, because he refused to submit to certain conditions named by him before he was interred. Some of these were

* It is, perhaps, almost supererogatory to allude to the case of Colonel Townshend recorded by Cheyne, but were we to omit to do so, some of our readers might suppose it had escaped our attention; we, therefore, barely allude to it. That gentleman possessed the singular power of dying and resuscitating himself at will, and it does not seem impossible that a Fakir, whose diet and regimen were so different from that of a flesh-eating and wine-bibbing English gentleman, should have possessed the power in a greater degree. See *Cheyne's English Malady*; the account of Mrs. Godfrey, in "*George Anne Bellamy's Apology for her Life*;" Taylor's works on "*Premature Interment*," and a paper by the author in the "*Scot's Magazine*" for 1828-9, on "*the probability that many persons are buried alive*."

† "The Court and Camp of Runjeet Singh."

unreasonable, and naturally awakened a sense of dread lest they should produce death indeed. Such was the stipulation to put Mahometan soldiers over the grave. This was a most distasteful proposal to an Indian, and the Fakir refused to consent to be buried under such circumstances, from which the author jumps at the conclusion that he could not live any length of time without food, and that his previous inhumations were deceptive. This must be acknowledged to be, at least, but a negative argument. However, we do not contend that Lieut. Boileau may not have been deceived—the thing was quite possible—but we protest against the course pursued by the author of "The Court and Camp of Runjeet Singh," in arguing, that because he would not consent to renew a dangerous, and perhaps painful experiment, under circumstances that left the successful termination somewhat doubtful, that, *therefore*, the Fakir could not, and never had been, *bonâ fide* buried and exhumed alive. Such an argument will avail nothing in the face of a positive assertion made by a disinterested witness.

There is a relation somewhat analogous by Baron Herberstein,* of "certain nations in the northern parts of Russia, near the river Oby—a magnificent stream running a course of 1900 miles, navigable nearly to its source, and abounding in fish—on the borders of Tartary, which he calls the Leucomori. These people, he says, sleep from the 27th of November till the 23rd of April, like tortoises, underground, and then come to life again, though quite frozen all the winter. It must be admitted that the phenomenon of sleeping persons come very near to those Leucomori, particularly that case by Dr. Oliver, where one Samuel Chilton slept once for a month, then for seventeen weeks, and again for five months,† yet did not fall off in flesh; but still, until other authorities corroborate the Baron's statement, we must withhold our opinion on the subject.‡ All the cases we have enumerated we consider as developments of morbid action, of anorexia, or irregularity in, or, in most cases, interrupted functions of, the nervous system, and consequent abnormal condition of the digestive organs. But we refrain from offering any theory or opinion until we have examined the case of Bernard Cavanagh, the Fasting Man, generally so called, and whose late unfortunate appearance in Reading led to his introduction to the treadmill. It will be necessary to go somewhat into this man's history, for the purpose of seeing what degree of credit is to be attached to the assertions which he and his friends have made of his great powers of fasting.

He was born in Currakaneddy, a small village in the county of Mayo, in 1817-18, and is consequently in his 25th year. His father is a respectable farmer, and rents his farm from Mr. Blake, of Merion-square, Dublin. Bernard seems to have been a thoughtful and abstracted child; was always found on his knees; and even in the field amidst the other labourers, for he worked in common with them on the farm, he would fall down in an attitude of prayer. In a physiological sense, he had already begun to evince unequivocal signs of monomania, or a diseased state of the encephaloid apparatus. It was not, however, till the death of his mother, to whom he seems to have been tenderly attached, that the disease developed itself ostensibly in an attack of fever; after running the usual course, the fever left him, but he remained in bed from the 2nd of September, 1836, to 2nd of July, 1840; during which period he neither spoke nor rose from his bed, except to have it arranged; and up to the period of his detection in Reading, in December 1841, he alleges he never eat.

To test the fasting powers of Cavanagh, 26 gentlemen of the town of Clarendon, in Ireland, half protestants, half catholics, made the following experiment.*

A room was prepared, the windows of which, as well as the doors and fire-place, were carefully sealed, and the seals placed in a box, the box sealed and the key and seal delivered to an inspector of police. Some biscuits, and a certain quantity of water, were left in the room with Cavanagh, the water and biscuits being previously weighed. At the expiration of seven days, seven nights, and four hours, the seals were broken in the presence of the 26 gentlemen who had instituted the experiment, and Cavanagh was found in no way reduced or altered. The water and biscuits were then weighed, and declared to be just as they were left. This experiment, as might be supposed, created a great sensation in Ireland, and the numbers of persons who flocked to see Cavanagh, appear to have increased the monomania under which he was already labouring. He set up for a prophet, and predicted strange things to come—saw visions and received revelations—and finally denounced, and was denounced in return by the catholic priests. We do not know why or wherefore he left his native village for Dublin, probably with some ulterior views of profit. The reason assigned, however, was his intention to visit the Pope, and to be ordained for the catholic church.

From Dublin he passed to Liverpool, and from the latter city to Manchester, whence he came to London; and here the author of this paper first saw him, in the Assembly Rooms, as courtesy designates them, in Theobald's-road, on the 27th of August, 1841. A report of his appearance in London, together with a description of his person having been published in the *Times* of the 28th, we shall condense it here:—

He was about five feet six and a half, or at most five feet seven inches in height. He was dressed decently, in a surtout, dark trousers and waistcoat, with a black silk handkerchief round his neck. His physiognomy was that of a self-satisfied monomaniac, marked with a strong expression of silliness. His complexion was good, and his cheeks red. He did not appear emaciated; his hair was brown, his eyes inclining to hazle; his beard thin, and his whiskers reddish; he was marked with the small-pox; he was by no means communicative, and refused to answer many trifling inquiries which involved no question of his abstinence. For example—did he urine? did he go to the water-closet? had he ever had sexual intercourse? what was his previous life, &c.? Finding him in this humour, we said—"You are an impostor, and you had better take care what you do in London." He replied for the first time with some animation, "Sure if I am an impostor, I am ready to be locked up again." After some deliberation, we determined to confine him in a room, or rather attic, which was about 70 feet from the pavement. The window was left open to give him air, though he was very anxious to have it closed as well as the fire-place, but for reasons which will be mentioned in their proper place, we declined acceding to his request. This was on the 6th of September, and the door was sealed by Dr. Richmond, Dr. Renucy, and others. Forgetting, however, to give him pen, ink, and paper, the door was opened for that purpose the next day, the 7th, in the presence of Dr. Renucy, M. Lafontaine, his interpreter, and several ladies and gentlemen, and after awhile closed, each person taking away his seal. He had stipulated to go to mass on the Sunday, and accordingly his door was opened again, in the presence of numerous gentlemen, and he was taken to the Sardinian chapel by Dr. Renucy and Mr. Smith, a solicitor. Neither of these gentlemen lost sight of him for one moment. On his return, he was again locked up, and the door sealed, &c. On the 16th he was finally released, there being a very great crowd to

see him. He did not present any marked appearance of emaciation, but we think he was a little paler than when he was locked up. His pulse, which was 76 when locked up, now ranged from 74 to 76. We forgot to say, that he was entirely stripped before being locked up, and his clothes examined, and we are convinced he took neither food nor drink during the period he was confined.

However, as some objections were started to the window being open, and it being possible that a very dexterous cricketer might have tossed a loaf in, it was determined to make another experiment upon his fasting powers, to which he cheerfully assented; and so far as human foresight could provide, everything was done to prevent imposition. To obviate the objection to the non-closing the window, as in the last experiment, a large room on the second floor was provided—but as this experiment was fully detailed by ourself in 'The Times,' we shall copy that account verbatim.

* It is rather remarkable that the pulse of Cavanagh and that of Ann Moore were nearly the same. We, however, attach little or no weight to the pulse. *Pulsus frequens, rarus, tardus, durus, mollis, plenus, parvus, debilis, &c.*, have very little weight with us. Celsus fitly described it as *res fallacissima*, but Galen, Boerhaave, Hoffmann, and others, considered the pulse as the all in all in fever; but Fordyce, as Hooper says, "well observed that fevers might exist and prove fatal without this symptom." (*Dissert. on Simp. Fer.*, p. 74.) However, the normal or healthy pulse "is easily felt, is soft, regular, neither too frequent nor too slow; it beats from sixty-five to seventy, or seventy-five times in a minute." It is, however, at other times slower, even in health, and has occasionally been as low as fifty, forty, or even thirty-five. Napoleon's pulse was fifty-four, while Addison's was intermittent; Hooper says, Dr. Graves mentions a lady in whom it was thirty-five; and Dr. Jackson, of Philadelphia, another in whom it could not be felt in any part of the body. Dr. Thomas Williams knew a man who enjoyed perfect health, yet his pulse was only fifteen; and we know a bookseller in the city whose pulse is only thirty-seven, yet a healthier man does not exist. In new-born infants, Heberden says, it beats from 120 to 140 in a minute; about the second year 100, and at puberty about eighty. In the case of an octogenarian it was twenty-six; in another only twelve; Sisari found it only eleven, while Wondt counted it twenty-four. In adults it is full, and is more developed than in infancy and youth. In women it is sixteen or twelve beats more than in man. In old age it is weak, larger, harder, and from fifty to sixty. Dr. Falconer maintained that it was more frequent in old age than in infants. Hooper thinks he might have been mistaken. It varies according to the posture of the body, a fact, it is said, first noticed by Dr. Macdonnell of Belfast; but we should say, it must have been noticed, though perhaps not recorded, by physicians from the very dawn of medicine. Dr. Thompson (on inflammation) has noticed this fact also, as well as Dr. Stroud and Dr. Graves, in the *Dublin Hosp. Reports*, 1839, volume five. The pulse does not vary when a man stands on his head. It is more frequent in the erect, than the horizontal posture, generally from six to fifteen beats, but if it be but sixty, then it is seldom accelerated more than six or eight; but with moderate exercise, it rises to ninety or one hundred, then the difference may be stated at twenty or thirty. Thus it will be seen that the pulse is, as we have already said after Celsus, *res fallacissima*, and unconnected with the *historia morbi*, and some knowledge of the patient, is worth little or nothing to the practical man, as we have again and again experienced, especially in the endemic or seasonal fever of the West Indians, in which, whatever the pulse may be, bleeding *pleno rivo* is *always* indicated, and if not had recourse to, the attack is prolonged, or, what is more frequent, the patient dies.

* "Commentaries on Russian History."

† *Phil. Trans.* for 1705. Is it too much to infer that the case of Phineas Adams (*Beck's Med. Jurisprudence*) was one of supernatural or mesmeric sleep? or that it was similar to Chilton's?

‡ In withholding our opinion, however, we do not say that a person's sleeping nearly five months is impossible. Quite the contrary; but we think it doubtful in the case of a *whole* nation.

* At the head of this committee was the Hon. and Rev. Mr. Gore, Dean of Killala, and brother to Her Grace the Duchess of Inverness.

PECULIAR CASES IN MIDWIFERY, WITH REMARKS, &c.

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[For the 'Medical Times.']

CASE OF MORBID THICKNESS OF THE UTERINE MEMBRANES.

ELIZABETH FRANCIS was in labour of her first child when I was called to her; she had had strong pains since six o'clock p.m., it was then nearly eleven at night. On making an examination per vaginam, I found the uterine membranes entire, the os uteri fully dilated, with every prospect of a speedy termination to the case. Being particularly averse to rupture the membranes artificially, (at all times, except under extraordinary circumstances, a bad practice, particularly in first labours,) I awaited the result of the natural efforts for a time; as the membranes protruded considerably, I felt assured that the delivery would speedily follow the breaking of the membranes. Pain after pain occurred, however, in rapid succession with great force, but no rupture. On repeating my examination, I found everything in the same position as before. From the strength of the efforts employed, I fancied some anomaly existed, and when the next pain occurred, I pressed the tip of my fore-finger against the bulging mass, but met with powerful resistance. I then separated my index and second finger, like the legs of an open pair of compasses, pressed them in that position against the protruding membranes, then suddenly twisted them round, making sure in my own mind of the rupture, but in spite of the most powerful efforts they continued entire. Feeling now confident some morbid peculiarity existed, I began to scrape the membranes in one place repeatedly with the finger nail, (and to my apparent feeling,) layer after layer peeled off; every instant I expected the waters breaking out, but was again disappointed. I now pressed the tip of my finger against the scraped portion of the membranes with considerable force during a pain, still no rupture. Under these circumstances I determined to delay no longer, and taking an abscess lancet, proceeded to open the membranous bag, in penetrating which I found as much difficulty as is generally found in sewing up a dead body after a post-mortem with a dull or broken-pointed needle. And when penetrated, the aperture did not enlarge of itself, the water escaping in a jet, so that I was obliged to make a long incision that the aperture might be sufficiently large. The labour terminated almost immediately after, and when the placenta, with its membranes, came away, I examined them, and found the membranes thickened to an enormous degree, as nearly as I could guess about a quarter of an inch, quite opaque, and very much hardened, not unlike the white of an egg when hard boiled; the thickening did not extend throughout the whole membrane, but occupied about six or eight inches every way from where the incision had been made, and formed that part which had presented.

So tough and unyielding was the membrane, that although there existed no other hindrance to labour being completed, yet I feel confident no efforts of natural labour pains would have accomplished the rupture. I think the case worth recording, as being one in which an artificial rupture of the membranes is justifiable in a first labour; such cases are extremely rare. I have occasionally met with very tough resisting membranes, but in a long practice nothing equal to what presented itself in this case. I cannot conclude this case without observing that I once heard a practitioner boast of his having saved himself many hours of tedious attendance in midwifery practice by rupturing the membranes artificially, and where he could not easily accomplish it with his finger, he used his pencil-case for that purpose. That labours might be completed in some cases by such means immediately after I admit, particularly where the female had borne many children previously; but it must be borne in mind that a vast majority of artificially ruptured membranes are *premature*, before the adjacent parts are fully prepared for the progress of the foetus through the

os externum, under such practice time is lost instead of being gained. I consider the plan highly pernicious, and it cannot be too much reprobated, particularly in first; nor is there any saving of time in subsequent labours, if an average be taken from large returns. Whilst I was in general practice, I invariably (except in extraordinary cases) allowed the natural efforts of labour to rupture the membranes, and in upwards of four thousand labours I found that practice most satisfactory, and would earnestly advise young practitioners never to rupture the membranes without very good cause for so doing.

CASE OF EXTRAORDINARY LENGTH OF FUNIS, AND ITS ARRANGEMENT.

Many years ago, I attended J. McNaughton, then in labour of her sixth child; it was extremely tedious, the head retracting as much between as it progressed during the pains, and this for five or six hours, although a common feature of first, or even a second accouchement, I did not expect it here. On the head emerging, I found the funis tightly wrapped round the neck of the child fourfold; I tried to liberate it, but found it so much on the stretch as to be impossible without breaking. Fearing the child's life, I was on the point of passing ligatures round it, intending to divide it, when the child was suddenly and wholly born, and the following appearances presented themselves:—The child had a blue livid tint, its face much swollen, and the funis from the umbilicus proceeded towards the left clavicle passing over it; then round the neck four separate times, afterwards crossing the chest, it went under the left arm-pit, round the left arm at the insertion of the deltoid, across the back in the direction of the right lumbar region, round the right thigh twice, over the arms, and lastly round the left thigh once, terminating by a short length at the placenta of about six inches. It had been tensely stretched during its whole length, and was consequently below the average thickness; when measured, allowing for the two inches left at the child's navel, it was four feet eight inches. It is difficult to account, not only how circulation was carried on effectually under such circumstances, but also the respiratory organs were in danger of suffering afterbirth from the tight pressure on the neck by so many of its folds. In this case, the child, after being a little time in a state of asphyxia, recovered well, and no unpleasant symptom showed itself afterwards; a slight red mark where the pressure of the cord had been, went off in three or four days. The continual retraction of the child's head in the interval between labour pains, is indicative of a short funis; the effect in this case, though a very long funis, was analogous from its being wrapped so many times round the different parts of the child's body. In contrast with this case, I have had two in which the cord measured in one case eleven and a half, and in the other not more than ten inches; and I well recollect what difficulty I had to obtain space enough to apply the two ligatures previous to separating it, so near was the abdomen of the child to the external parts of the parent. Dr. Haighton mentions a case of short funis measuring only six inches. In such a case, if retention of the placenta existed, a rupture of the cord would be inevitable, and I should imagine the placenta must have been entirely separated from the uterus before the child was born, and that it accompanied the child in its descent, probably between its legs, otherwise I cannot see how a rupture could be avoided. Dr. Blundell remarks, "little inconvenience arises from a short cord, except that of premature detachment of the placenta, and consequent hæmorrhage." I have, however, seen cases of inflammation, and tedious ulceration of the foetal umbilicus, which I could attribute to nothing but the tense state of the cord in consequence of its peculiar shortness.

RETENTION OF THE PLACENTA.

There are many cases of simple retention of the placenta for a time, arising from its engorgement with blood, making its volume considerable, and in other cases where the placenta is above its average size, independent of its fulness of blood. In such cases, I have been in the habit of practising a very simple, and often very effective plan, which I do not recollect is spoken of by any ob-

stetrical writer, viz., after the time is expired which is judged necessary to wait for the expulsion of the placenta by almost natural efforts, or at most with extending the cord in a proper direction before resorting to more determined measures with a pair of scissors, (which are always at hand,) I cut off the end of the cord above the ligature, and let out one or two ounces of blood into a cloth, when I have frequently found this simple way of reducing the volume of the placenta (by bleeding) facilitate its removal surprisingly, as well as give a little excitement to the uterus by the volume within its walls being reduced. If this fact was more generally known, I think it would do away with the necessity of introducing the hand so often, which is scarcely justifiable, except in extreme cases.

UTERINE POLYPI.

I was called to Jane Goddard, æt. 40, who had had two children, the youngest three years old at the time. She complained of being subject occasionally to severe down-bearing pains very like labour, accompanied with rather free discharges of blood: as she menstruated regularly, there was no suspicion of pregnancy, and as the flow of blood between the menstruating periods was of a character so totally different, and at the time of my seeing her the pains and discharge were accompanied with the feeling of some substance descending the vaginal canal, I suspected prolapsus uteri with some structural derangement of the uterus or its appendages. I was further confirmed in my views from my patient having felt an enlargement over the pubis, but which had disappeared since the sensation of bearing down in the vagina commenced. I therefore proposed an examination, when I discovered a polypus about the size and shape of a very large pear, lying in the vagina, and the pedicle by which it was attached I could distinctly trace within the os uteri, and inserted at a short distance from it the pedicle itself, about the thickness of a smoking pipe. I at once determined to apply a ligature, but being at some distance from home, and being unwilling to lose so good an opportunity of reaching the pedicle, I sent to a saddler's for a length of silk whip-cord. Whilst the messenger was absent, I separated my first, second, and third fingers triangle wise, and surrounding the tumour with them, I tried to twist the tumour round in the vagina, when I found I could do it with great ease, and actually twisted it quite round six or seven times, when my patient complained of pain; I rested a short time, and when the pain subsided, which it did speedily, I resumed the manipulation and accomplished three turns more; pains again occurred; I rested a second time, taking care, however, during the interval, to keep the tumour where I had succeeded in placing it, without allowing it to twist back again, which I found it was inclined to do; in this I had some difficulty, as the twisting had so far shortened the pedicle as to increase the distance of the tumour from the os externum. I proceeded a third time with the twisting, and on the second turn felt the pedicle snap, my patient started, and the tumour fell loose into my hand, scarcely any hæmorrhage followed, and she got quite well, not one symptom of uneasiness showing itself, and took only a little aperient medicine occasionally. I have attended the same female in three subsequent labours, in which there was nothing deviating from natural circumstances. The tumour weighed nine ounces. About two years after the above case, I removed a small polypus attached to the cervex uteri by a slender pedicle of about four ounces weight by the same means, and with similar result. The ergot of rye has been frequently given, and often with great success, in expelling polypi from the uterine cavity; and where it could not effect this, it has been very useful in forcing the mass so low down in the vagina that its pedicle could be easily come at for the application of a ligature. I think the ergot at all times an excellent remedy, and should be tried except where the tumour is unusually large, and its pedicle thick or ill defined. But from the many cases I have seen of my own, and in the practice of others, I am inclined to the opinion that a vast majority of uterine polypi have very slight pedicular attachments; *if this be*

correct, (and the many cases recorded of their being expelled by natural or forced uterine efforts, and others forced down sufficiently low for the application of ligatures, bear me out in this opinion) then, where the size of the tumour and its character will admit, I should always try the plan of twisting as in the cases just related, before having recourse to ligature or other means. The wound by this plan is a laceration by extension, and being so, less disposed to hæmorrhage than that by cutting, ligatures, &c.

FORM OF MALIGNANT DISEASE IN THE FELINE CLASS OF ANIMALS; ADVANTAGES OF COMPARATIVE PATHOLOGY.

Being the subject of a Paper read before the University College Medical Society, at its last Meeting for the Session of 1842.

By JAMES B. THOMPSON, A.B., M.D., Member of several Medical and Surgical Societies.

THE subject of malignant diseases being one of a very complex and comprehensive nature, I feel it would be an endless labour to speak of it at any length, my object on this occasion will be to put before the society a few facts, though not perhaps of themselves possessing any novelty, still, I trust, they may be deemed of adequate interest to merit the attention of the society. Before I say more on this subject, I think it may here be well to offer a definition of what is generally meant by the word Cancer. Those growths may be termed cancerous which destroy the natural structure of all tissues, which are constitutional from their very commencement, or become so in the natural process of their development, and which, when once they have infected the constitution, if extirpated, invariably return, and conduct the sufferers who are affected by them to inevitable destruction, and a premature grave. The forms of disease which may be classed under this head are extremely various, though in some cases they pass into each other by imperceptible gradations. The parts in the neighbourhood of a cancer usually become firmly connected with it at an early period; hence carcinoma is less moveable than other growths.

What induced me to come before the society on this occasion, was owing to having recently met with a case of malignant disease in one of the feline class of animals; and as we are all aware of the vast and paramount practical deductions derivable from the comparative anatomy of the lower class of animals, I was induced to submit the subject of the case alluded to, to the notice of this society, with a view to direct the attention of the members of the profession generally to what may eventually lead to some useful results, as regards the pathology and treatment of this form of disease in the human subject. I am disposed to imagine, that had medical men attended more closely to the diseases peculiar and prevalent amongst the inferior animals, which are, indeed, in very many instances, analogous, if not the same, as are met with in our fellow man. Besides, there is great facility for procuring morbid specimens in every instance, where it exhibits itself in the lower animals, to what there is when it occurs in the subject of our own species, which you must be all aware is mostly, in every instance, not easily obtained, from the scrupulous anxiety of the relatives and friends of the deceased. This is more particularly confined to England, Ireland, and Scotland, than to other parts of the world; hence, probably, arises, the decided superiority of French and continental pathologists over those of our own country, owing to the little regard comparatively shown by the inhabitants of these countries to their deceased relatives. I apprehend, sir, that we are as yet in partial, if not total obscurity as regards the pathology of morbid tumours and fungoid growths; but those, of course, peculiar to certain tissues, may often be distinguished with certainty without minute examination, as is the case with neuroma in nerves, and with polypi in mucous membranes. The subject, if I may so call an animal, of these few remarks was a *cat*, a female of 14 years of age, which had given birth to a succession of young ones, during that long

period up to the last twelve or fifteen months, at which time this specimen of the disease now before the society presented itself. It may be right to notice that the young ones were never left with her, but were invariably committed to the Serpentine in Hyde Park as soon as they made their way into the world: my reason for adverting to this circumstance is, because the disease originated in the mammary gland of this animal; and may not this be one reason for accounting for the at least probable mischief likely to accrue from the practice of not allowing the parents of all animals to suckle their young? for we know that in the human subject, this disease is more frequently met with in females who have been married, and had always sent their children to nurse, or in females, of an advanced age, who may get married, but never have borne children; for to me it appears contrary to the laws of nature that the parent mother should not suckle her own young, and we all know that the child thrives much better on its own natural suck than on that of a strange nurse; this of course has only reference to those cases where there may not be any justifiable cause for the mothers not undertaking this office; there are many cases where the parent cannot, with propriety or justice to herself or her child, attempt to suckle, even after the birth, or at least after the first week or two. In this case the disease occupied the anterior portion of the mammary, and assumed a somewhat lobulated form. It was about two inches and a half in length by one in breadth, and had the round elevated margin, so peculiar to diseases of this character. It was situated on the fore and lateral part of the right side. The poor animal was for ever licking the sore, and by that means kept it exceedingly clean and preternaturally red; you could on this account see with the naked eye the peculiar fibrous net-work at the bases of these sores; for when I at first saw them, they were three in number, detached from each other a little; but it would appear the disease ate its way through these portions originally, dividing the sores, and eventually ran into each other and formed the sore as you now see it: whenever the cat was prevented from licking the sore, even for a very short period, there was that peculiar and most offensive smell perceptible in the room, so much so, that the lady, her owner, had been obliged to have her removed from the drawing-room where she previously had been so welcome a guest. It would be well, sir, to inquire if there is anything in the chemical properties of the saliva of this class of animals that has that tendency to remove or destroy the bad odour arising from the discharges, or rather the secretions of such morbid diseases, as that at present under consideration. I know it is a very common opinion among the Irish peasantry, that the causing a dog to lick a sore of any description will be one of the speediest ways of healing up, and permanently curing, that wound or sore. The tongue of the dog seems to have a peculiar effect on sores of even the most indolent character, and the persons who have experienced it, have told me that while the dog is so employed, they represent their feelings at the time to be those very nearly resembling that state produced by the new theory of animal magnetism; what may appear still more strange is, that the ready application of the portion of the tip of the tongue of a fox, no matter how long dead, will, when for a short time laid over a part where a thorn has insinuated itself, be followed on the removal of the tongue with the thorn, no matter how embedded or deep seated it might have been. I fear, sir, I have digressed somewhat from the subject of this paper, but that such are the facts as now stated in the case, I have not the slightest doubt, but the "why and the wherefore" they can thus act, I cannot well understand. As before stated, sir, we are aware that the inferior animals are prone to most of the diseases to which man is heir to, with perhaps the exception of the class of malignant diseases, and from some inquiries which I have made, and from a search in the several museums, I cannot procure or adduce another instance of this disease in the feline class of animals; indeed, it is rare also in carnivorous animals, but Dr. Hodgkin tells me he has seen it

in a dog. Birds of prey, too, are more or less exempt from the disease. I once had an opportunity of seeing the disease of fungous hæmatodes in an owl, and when I saw it, though the bird was previously a very fine, large, well fed and plump bird, it was then emaciated and reduced to a perfect skeleton, having lost not only its muscular and adipose fulness, but all its plumage. The disease was in the right eye, which I removed, and the bird lived for six weeks after, proving that the success of the operation was itself beyond a doubt, and that if it had been resorted to at an earlier period, it would in all probability have preserved this pet-bird to its owner.

(To be concluded in our next.)

MOVEABLE CALCULUS, THE SIZE OF A PISTOL-BULLET, TRAVERSING THE TRACHEA AND BRONCHIA.

A VERY curious case of this kind occurred in the practice of Mr. Ewart, Surgeon, of Alston, the particulars of which are as follows:—A young man, 29 years of age, had followed the occupation of a miner for eleven years, during the first nine of which, he enjoyed as good health as miners, of his standing, generally do. They are almost all affected with shortness of breath and mucous expectoration loaded with dust. About two years ago this man became affected with more decided fits of dyspnoea, attended sometimes with pain in the left side of the chest. These symptoms gradually increased in severity, especially the pain, which he assigned to a spot apparently corresponding to that part of the left bronchus situated below the arch of the aorta. This pain was aggravated by lying on the left side, or bending the body to the left. He had also fits of palpitation, and a sense of imminent suffocation, produced, as he alleged, by something rising in the lower part of the trachea, and obstructing the entrance of the air into the lungs. He continued, however, to follow his employment till the summer of 1841, when he was seized with acute rheumatism, the thoracic symptoms still continuing unmitigated. The rheumatic fever was subdued by the usual means, after which the stethoscope detected consolidation of the upper portion of the left lung. In the beginning of October last, he was induced, one evening, to take an emetic, which operated severely. Next morning he was seized with a violent fit of coughing, which continued, until he brought up, with suffocating effort, a round ball through the rima glottidis. On examination, it was found to be a globular ball of stone, the size of a pistol-bullet, enclosed in a kind of membranous investment of inspissated mucus. It was found, when sawn into, to be composed principally of sand, and is of very compact texture.

The probability is that this stone was gradually formed by the progressive agglutination of sandy particles, while the man was, during five years, mining in a stratum of similar composition to that ejected from the lungs, and breathing an air containing silicious dust, and stagnant at the same time.

After the expulsion of the stone, the man was no longer troubled with palpitation, dyspnoea, or inability to lie on the left side. He felt a soreness, however, in that side, and a sensation which he could not well describe, in the spot originally alluded to. For a short time, his health was much improved. But latterly he is evidently declining, from tuberculous deposits in the lungs, to which he is hereditarily predisposed, and there is no doubt but that he is in an early stage of phthisis.

The stone has been forwarded to the Editors—*Med. Chir. Rev.*

MEDICAL NEWS.

The Governors of the Gateshead Dispensary met on Tuesday, to elect a House Surgeon and Apothecary in the place of Dr. Tinniswood, resigned. The Mayor proposed Mr. Thomas Common; and Mr. Kell seconded the nomination. No other candidate being nominated, Mr. Common was unanimously elected. Mr. Swinburne proposed a vote of thanks to Dr. Tinniswood, for his able, assiduous, and humane performance of the duties of his office. Alderman Pollock seconded the motion, and it was carried unanimously. Dr. Tinniswood having returned thanks, the meeting separated. [One of the candidates for the vacancy, a resident in the West of England, describing himself "a Member of the Royal College of Surgeons in London, and a Licentiate of the Apothecaries' Company," had the liberality, in his letter to the Honorary Secretary, to make the following offer:—"If (said he) you can render me any assistance, so as to secure my election to the office, I shall very cheerfully give you 20 or 30 pounds for the trouble I may give you!" We ought perhaps to state, and in justice to the successful candidate, that he was not the person who made the impertinent offer.]—*Gateshead Observer*.

TO CORRESPONDENTS.

A Correspondent, who does not give us his name, sends us a charge against the Medical Officers of the Medway Union. He is declared to have sent in a return to the Poor Law Commissioners to the effect, that each ward could accommodate 35 inmates; whereas, some time ago, he positively vouched that each ward could hold but 30. He further recommended paupers to be placed in wards, which, on a former inquiry, he had pronounced to be unfit for habitation, being dark, damp, and unventilated. We have ascertained that there is general truth in the statement of our Correspondent, or we should not, as being anonymous, have given it even this short notice.

Dr. Forbes' letter has been received.

Observer tells us that Mr. Wakley's publisher, appealing to advertisers, says, "the professional duties of its readers bringing them into contact with the nobility, advertisements, therefore, acquire circulation," &c., and remarks that "The Lancet must have a high opinion of its readers when it considers them but as advertising gossips."

"A Constant Reader" inquires if he can demand remuneration, as for an operation for cutting off a pauper's finger. We think not. The Commissioners mention specifically the names of the various operations for which they award extra payment, and the finger is not among them, though the hand is. An application to Mr. Chadwick, the Secretary, Somerset House, London, would meet courteous attention.

Dr. Pierce, Newcastle, Ireland; Dr. Annan, Kinross; Dr. Irvin, Castleblaney; Dr. Malden; Mr. Hardcastle; Mr. Stuart, Dunse—received.

A Constant Reader, Wycombe.—We dislike answering such questions, but we may say that we should prefer Costello's Cyclopædia.

Mr. Murray's name is not on our books, and he has omitted to give us his address. We believe we could let him have 35 out of the 37 numbers he wants, but we must get his order through a bookseller.

In answer to a number of Correspondents, we beg to say that we shall attend to the reports sent us on the Medical Charities Bill in our next number.

We have been obliged to postpone much interesting matter, among which is an able pencilling of the Westminster Lecturers by PROBE, which will appear in our next number.

Mr. Hale's letter has been received.

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THE MEDICAL TIMES.

SATURDAY, JUNE 4, 1842.

TO THE HONOURABLE MEMBERS OF THE
BRITISH HOUSE OF COMMONS.

A man may save gold too dearly.
MONTAIGNE.

GENTLEMEN,—Your powers, whatever they are to you, are an awful thing to others; your every action, nay, your every omission in the august place of your meeting, carries with it bane or blessing to millions, in whose joys or sufferings a common humanity and country gives you a common concern. But grave and great as are all your legislative responsibilities, there are none greater or graver than those which encircle you while decreeing the provisions of that Poor Law, which, for a few days more, yet remains in your power. The fate of thousands of our professional brethren, with that of nearly millions of our poorer labouring countrymen, depend on that bill—as that bill now happily depends on you—and we think it not remote from our duty, as medical journalists, to submit, ere those days escape us, a few suggestions which, if adopted, may make its medical arrangements at once more just to society, and affect—we believe for good—the happiness of the numerous individuals whom it more immediately concerns.

The first duty we ask of you, is to supervise the whole question of medical remuneration for Poor-Law attendances. The question touches—we own it—medical men's comforts, and medical men's respectability; but it touches still more essentially the lives of your poor fellow-countrymen. The present system, we confidently assure you, is one of murder, and we speak of it with some acquaintance with its working;—it is a system of premiums for inadequate, a system of punishment for effective attendance on the pauper sick. We thus prove it:—

The Guardians contract for the services of the medical officer. They advertise—they fix the salary—they choose—they pay the elected; yet they have a direct interest in the cheapest possible terms, and none in the competency of the surgeon who may concede them. They are therefore the worst party you can select to appoint the medical officer. Transfer, then,

the appointment from them, or abrogate contracts, and institute a fixed rate of remuneration. You cannot wisely leave guardians in a position in which the only state inducement to regulate their appointments, is one which but takes cognizance of the cheapness of the candidate. You cannot justly make Guardians appoint medical officers, and then make it their interest to appoint the lowest kind. Thus far abstractedly—how is it practically? The rate of medical Poor-Law remuneration has been made less in many, very many unions, than the wholesale price of the drugs, which a system of calculations proves should be administered to the sick. This is an important demonstrated fact, and has been shewn by us in our past numbers, has been deposed to by respectable witnesses who have been examined before one of your committees, and we now, if there be any doubt left on the matter, pledge ourselves to prove its truth before the House in reference—we speak guardedly—to every thirty unions in the hundred. Can you, then, act thus, gentlemen, if you really mean to give your pauper sick more than the mocking semblance of medical attendance? Do you expect that the reckless avarice of the Guardians will be made up by the sense of justice of the wretched practitioner—that the self-sacrifices of the servant will make up to the poor for the self-savings of the masters? Not so will think the man who knows humanity. It will not do to cheat the medical officer, and then rely on his own honour that he will not indemnify himself out of those whom you have helplessly placed in his power. You have set him the example, and he is not likely to submit to indignity for nothing. Low as are your terms, he will have a profit out of them; he would not have taken them otherwise. Unfortunately you leave him the power, and it would indeed be impossible wholly to deprive him of it. There is this important circumstance in medical appointments—at the lowest terms he can cheat you. You must rely wholly on his own sense of justice. However cheaply you have succeeded in hiring his services, you have done nothing if you are not dealing with a gentleman. You cannot prescribe to him the number of his visits, the nature of his attention, the quantity and the quality of his drugs; yet on his doing you justice or injustice on all these circumstances, depends the question whether you have gained or lost by the cheapest of your bargains! Your low terms are injurious to the respectability of our profession—they are mischievous to the pauper sick—but it is not so clear that they are ruinous to the medical officers whom you have in your service. We have no space to enlarge further on this vital matter; but we have said enough to win your consideration for the anxious wish we now express that you will dispose of no amended Poor-Law Bill before finally remodelling the whole system of pauper medical re-

muneration. Your alteration, in our opinion, should offer these important divisions. You should separate the prescribing from the dispensing department of union attendance. This would be pro tanto a guarantee for the poor. You should enumerate the whole population of a union, whose circumstances do not enable them to pay for medical attendance, and give them permanently, as justice demands, an *immediate* command of gratuitous medical advice. You should rate the medical officers' remuneration according to the number of those who so command his services; and in adjusting the rate you should remember that as all dependence for proper treatment for the poor rests in the officer's being a gentleman, it would be wise and just to treat him like a gentleman by the terms of your appointment.

These are important alterations, but not more important than indispensable; and we would respectfully warn you, that if you would be free from the murderous vices which they pre-suppose—you must yourselves strike the blow. The three Commissioners have neither the power nor the will. The Guardians are, in a great measure, (as might almost be expected from their immediate pecuniary concern in the matter,) opposed to any liberal system of medical remuneration. The Commissioners have already too many points of collision with them to wish for new. And why should they? Forming the executive in respect to this mighty social law, they should, if you would consult its efficiency, be spared the initiation of any repulsive law. The less they are identified with its origination, the more power will they possess for its enforcement. The truth, then, is obvious; if these alterations should be made—and that they should (we think) is indispensable—you must not rely on others, but make them yourselves. The medical profession to a man confidently expect this from you.

Gentlemen, there is another point about this Poor Law calling for your attention; we refer to the exclusion of Irish and Scotch medical men from the English Poor Law appointment. The Commissioners, in framing such a regulation, obviously violated the letter and spirit of every statute and charter, the *most* binding and fundamental we are acquainted with, by which the three territories were constituted one kingdom. They were under the impression, we have learned, that the words of your act limiting the appointment of union medical officers to "*persons only licensed to practise as medical men*," excluded all from the appointment who had not received a diploma from an English source. Their legal adviser—we say it on the best authority—misinformed them. No such narrow construction could fairly be placed on the words of the act. The possessors of diplomas from many of the Irish and Scotch sources are *literally* "*duly licensed to practise as medical men*," though the bye-laws and charters of certain institutions may in-

terfere in limiting the extent of that practice locally. No such limitation does, or can hold good with regard to state appointments. The spirit of "*the Poor-Law Amendment Act*," which sought but *good* medical attendance, as tested by a duly licensing body—the acts of union—common sense, alike protest against any such miserable and *personally injurious* construction of words which naturally bear a sensible and favourable interpretation on their very face. If we would illustrate, in a still stronger light, the little dependence to be placed on the Commissioners' legal adviser, we have but just to refer to the accompanying regulation by which a surgeon and physician with diplomas from the two London colleges may be made a union surgeon and apothecary. If one thing be more certain in law than another, it is that no surgeon or physician can legally practise as an apothecary, and whoever has attended to law proceedings, can not require to be reminded how often the Apothecaries' Company have recovered penalties from surgeons and physicians acting in such a capacity. But while this *sectarian* exclusion is thus at once illegal and unconstitutional—for no power out of your House should be thus allowed to practically repeal our fundamental statutes—its *heptarchic* barbarity (so to speak) forms a still worse feature, and united, surely demand your immediate interference. The nineteenth century is not the time to remove the border feuds and national antipathies of the dark ages, and in a *learned* profession, too, which (heaven knows!) has enough already of its own party and personal dissensions.

With these few suggestions, hastily thrown together, on the principal grievances which our profession places at the door of the new Poor Law, we leave the matter in your hands, only adding, as citizens, that the less you scourge labourers by a miserable workhouse into a fierce competition for employment, which no competition, be it remarked, can increase, the more you will consult the general happiness of our rural population, and the more tend to give safety to property, and stability to the state. Humanity in slight excess may be a fault, but it is a fault on the right side—one that presses lightly on the good man's conscience, and which, when a *people* were its objects, never yet ruined a country.

EXTRACTS FROM FOREIGN JOURNALS.

[For the Medical Times.]

AMERICAN.

On the Treatment of Intermittent Fevers. By Dr. Austin Flint.—The principle advocated by Dr. Flint in the treatment of the above disease, consists in the administration of sulphate of quinine in large doses. The following is the mode in which he was led to adopt this practice:—Being an assistant-surgeon at Poinsett Barracks, when some companies of artillery were ordered there, he found so many men affected with intermittent fever, that it was

impossible for them all to enter the hospital at once; on the other hand, the inconvenience of making them come at fixed hours from their quarters, and the liability of their neglecting to take the medicine if left to themselves, suggested the idea of giving them, in one dose, or in two at the most, and between the paroxysms, the necessary quantity of quinine. He commenced at first with 5 grains, which was repeated every twenty minutes; and he then gave 10, 15, 20, and even 40 grains every half hour; convinced not only of the absence of danger, but even of the utility of this practice, he afterwards made a habit of prescribing at once, and in a single dose, from 20 to 50 grains, according to the case, to those patients who could not stay in the hospital. The number of patients treated by this method was 33. The following are some of the principal facts elicited from those cases:—

DURATION OF THE DISEASE.—Three subjects were labouring under a first attack, eleven were affected for a second time, and at variable intervals, from four years to a few weeks.

IMMEDIATE EFFECTS OF THE MEDICINE.—In 19 cases, its administration was followed by no effect worthy of notice. Nausea was produced in 4 cases, vomiting in 1, headache in 1, a temporary deafness in 4, vertigo or giddiness in 9, and tingling in the ears in 8.

EFFECTS UPON THE PAROXYSM.—In 9 cases the paroxysms entirely ceased after the first dose; in 11 another paroxysm occurred; in 5 two, in 1 three, and in 1 four, but in all a cure was induced by this treatment.

LENGTH OF TIME DURING WHICH THE PATIENTS WERE RETAINED ON THE BOOKS.

—The mean duration was five days and a half, the shortest being three, and the longest eleven days. The following case, in which the largest quantity of quinine was administered, presents sufficient interest to be transferred to our pages.

CASE.—Bailey was attacked with a shivering fit at the moment when I called to examine him. I immediately ordered twenty grains of sulphate of quinine. In a few seconds, he said that he felt better, but still the shivering and horripilations continued; another dose of twenty grains was then prescribed. An instant after he was affected with tingling in the ears and nausea; he was sent to bed in the hospital, and at the end of an hour complained of being deaf, and of experiencing giddiness and nausea, but without vomiting; the pulse was greatly accelerated, and moderately full; the skin hot. The deafness and dizziness continued some hours, and the next morning he said that he felt well, and had rested during the night. At the end of two days no fresh paroxysm had occurred, and he was ordered back to duty.

Dr. Flint states, that he has proved, from various trials, that the administration of sulphate of quinine prevents more surely the return of the paroxysm when given some time before the expected access; but he has also remarked that the administration of the quinine during the cold, or even the hot stage of ague, is not so injurious as has been said, or rather that it is not at all hurtful; for, according to his observations, the paroxysm may be arrested by this medicine when given during the cold stage, or at least it will be remarkably diminished in its duration and intensity. He also combats the opinion of some pathologists, that several accessions of the fever ought to be allowed to take place before having recourse to the febrifuge; for he has found the cure most difficult to obtain in those cases where the relapses have been most frequent, and also, that where the paroxysms have been cut short from the commencement, the cure has appeared most perfect.

On Paralysis, sympathetic of Affection of the Viscera. By Dr. Zabriskie.—The following cases present considerable interest, inasmuch as they direct our attention to those forms of paralysis dependent on disease of the various viscera, a subject which has been hitherto much neglected; for if, perhaps, we except paralysis from lead, there is an almost universal disposition to attribute this morbid condition to some alteration in the brain, the spinal marrow, or the large nervous trunks, to the utter neglect of those not unfrequent cases of paralysis originating from visceral disease, from rheumatism, and from certain unknown causes, which, however, are of the highest importance in a practical point of view. We will now give two of the most interesting of his observations:—

Intermittent Paralysis, complicating an Affection of the Liver.—CASE.—Miss Q—, 16 years of age, was attacked, in April, 1840, with acute hepatitis, characterized by pain in the right hypochondriac region, extending to the shoulder of the same side, with considerable tenderness on pressure, and enlargement in the region of the liver; loss of appetite, quick pulse, tongue white and furred; she experienced a febrile exacerbation every evening, accompanied by acute pain and a prickling sensation in the right foot; a well-marked remission took place towards morning. The disease resisted the ordinary means, and passed to a chronic state, attended by the same daily exacerbations, as also by amenorrhœa and acute pain in the loins. The prickling of the right leg diminished, and was replaced by a sensation of numbness and loss of motion in this extremity. These phenomena took place towards evening, and then the patient could neither walk, nor move her leg, which was perfectly insensible; this condition, however, disappeared towards morning, along with the pain in the side and the fever, the sensibility and motion of the leg returned, and the patient could walk during the intermission without any other difficulty than that depending on extreme feebleness. Thinking that there was some diseased condition of the vertebral column, or the spinal marrow, cupping-glasses were applied, with blisters and the actual cautery over the painful part of the loins, but without producing any effect upon the state of the leg; twenty leeches were applied to the right hypochondrium, to which the patient had objected while the disease was in an acute state, and the pain as well as the febrile and paralytic symptoms quickly disappeared. During the summer she had frequent returns of the hepatic symptoms, which were always accompanied by numbness of the right leg, and which were checked by the application of cupping-glasses or leeches to the right side, or by bleeding from the arm. But each time the paralytic symptoms, which appeared to have no relation with the pain and numbness of the back, followed exactly the variations of that of the side, and were relieved by the same means and at the same time as the hepatic symptoms. There was then no difficulty in recognising the paralysis as a symptom of the hepatitis.

Enteritic Paralysis.—CASE.—Lynch, 28 years of age, of a sanguineous temperament and sober habits, was received into the hospital, in June, 1835, with complete paralysis of the lower extremities, both with regard to sensibility as well as motion; there was also paralysis of the rectum and of the bladder, and the evacuations were involuntary. He complained of weakness, with pain in the region of the loins, and a sensation of uneasiness in the intestines, from which a sanguinolent mucus was constantly issuing. There was great sensibility above the umbilical region. The intestinal inflammation was combated by calomel and opium, followed by astringents; at the same

time, cupping-glasses, leeches, blisters, and the actual cautery, were applied over the painful parts of the spine; various other means directed against the paralysis were equally unsuccessful; lastly, the patient continuing to experience great pain in the epigastric and umbilical regions, and the dysenteric symptoms remaining unrelieved, some leeches were applied in this situation, and the next day the patient had a return of sensation as well as the power of motion in his legs. From this period the dysentery ceased, and the sphincters recovered their functions; a further application of leeches every second day, for three weeks, perfected the cure.

The above case greatly resembles those reported by Abernethy, in his work on local diseases, and in which intestinal affections, without appreciable lesion of the spinal marrow, were complicated with paraplegia.

RECOLLECTIONS OF PARISIAN HOSPITALS.

Being Notices of Cases in the Practice of Dupuytren, Roux, Boyer, and Lisfranc.

By J. NOTTINGHAM, Esq., Surgeon, Liverpool.

HYDROCELE.—Nov. 26, 1832. M. Dupuytren operated for hydrocele by incision on a man aged 30. A like operation had been performed at an earlier period, and on the same side of the scrotum, but the disease had returned.

M. Dupuytren, with a common scalpel, cut into the cavity of the tunica vaginalis on the fore part, and lengthened out his vertical incision with the aid of a probe-pointed bistoury.

This done, and the tunica vaginalis everted, M. Dupuytren exposed the testicle *par enucleation*, and examined its surface. The operation was finished by cramping the cavity of the tunica vaginalis with *charpie*, and the patient then directed to walk away.

2. HYDROCELE.—*Accidental Puncture of the Testicle.*—Dec. 1, 1832. After M. Roux's visit at *La Charité*, a man with hydrocele was placed on the table. M. Roux took up the trocar, and pushed it immediately into the tumour. The patient screamed awfully, and seemed to have suffered much by the puncture. The trocar was now withdrawn, but no fluid escaped from the canula. M. Roux, for the purpose of clearing up the diagnosis, now lighted a candle, and examined whether or no the tumour had its wonted translucency; and finding this to be the case, introduced the trocar a second time, but with more caution, when the fluid escaped, which was expected to have issued after the first puncture. An injection of heated wine was now employed, the tunica vaginalis being twice filled with it, and each portion allowed to remain about eight minutes before it was let off through the canula.

In this case M. Roux, at the first introduction of the trocar, evidently punctured the testicle, and the end of the canula resting upon that organ, appeared to be the cause of the detention of the fluid, and its refusing to flow through the tube.

3. HYDROCELE.—Dec. 4, 1832. M. Boyer operated for hydrocele by tapping and injection, using warmed wine as was done by M. Roux. The patient, a man of 55 years, complained of great pain while the wine was being injected, but was easier soon after the tunica vaginalis was distended by it; probably the first shock of the heated fluid was greater than anything produced afterwards, when the wine gradually approached the temperature of the body. M. Boyer remarked, after the operation, that it ought never to be done without previously making a careful examination of the tumour with the aid of transmitted light.

Remarks.—There is perhaps nothing of

great importance to be said in connection with the two cases last noticed, saving about the accident of puncturing the testicle which M. Roux met with; and side by side with it the caution given by the experienced Boyer, to examine carefully with the candle before the operation, to obtain a clear notion of the nature of the case, and to observe carefully the position and condition of the testicle before taking up the trocar, these supplying hints which the young practitioner will find worthy of a place in his memory.

It would not be easy to tell why M. Dupuytren operated by incision in the case first mentioned, especially after the attempt had once completely failed, but there was often, even in the treatment of ordinary matters, a degree of originality and departing from the beaten track in his proceedings, which those students who knew him best did not always think it expedient to inquire about.

It is easy to understand that where we wish to irritate and produce inflammation on the surface of the tunica vaginalis generally, the irritating cause ought equally to affect every portion of the interior of its sac, and that a stimulating fluid thrown into it is likely to answer this purpose by diffusing itself generally throughout the cavity, and supplying a cause of irritation to every point, is at the same time tolerably obvious; while, on the other hand, making every possible allowance for the excellence of the Parisian *charpie*, it does not appear that we could expect to obtain, by cramping this substance into the tunica vaginalis, that evenly diffused irritation and inflammation which a fluid stimulant produces, and which circumstances have required; for the folds of the membrane towards the back part, and upon the epididymis, are such as to render the application of the *charpie* in this region more or less uneven; and, by consequence, to oppose the favourable progress hoped for from the treatment. In this way, or for want of evenly diffused and complete irritation, we may probably account for such failures as that which had taken place previously in the case operated on by M. Dupuytren; for there was not any disease of the testicle to account either for the choice of the operation by incision on this occasion, or for its unfavourable results before.

Recollecting a few cases of hydrocele which I have treated by acupuncture alone, I am inclined to regard this method as only well suited to the early stage of the disease, where the tunica vaginalis has not yet lost much of its normal sensibility, or irritability, and where the accumulation of fluid is not great: when the disease is characterized by such conditions, and acupuncture is practised, the complaint almost invariably returns.

I have at present under my care a case of hydrocele, which appears to illustrate well the relative state of sensibility of the parts at different periods of the progress of the malady; the patient is 45 years of age; during the last four years he has had hydrocele, at first on both sides; soon after its commencement he was tapped on the right side, the fluid being let off, but no injection employed; on this side the complaint entirely disappeared after the tapping.

Recently, at his request, I punctured the left side tumour in several places in the usual manner, this being done because of his unwillingness to submit to the tapping and injection. A considerable quantity of fluid oozed from the punctures, and after a week the tumour was greatly diminished in volume, so that for some little time the patient thought himself cured. The disease, however, returning, he came to me requesting the tapping and injection might be done.

Here is a case, then, of double hydrocele, showing, 1st, that in the early stage of the complaint, even the little irritation of the interior of the tunica vaginalis produced by one puncture of the trocar, aided, perhaps, in a minor degree by the inlet of atmospheric air, was sufficient to effect a cure; while, on the contrary, we find that the older hydrocele of the opposite side, at a later period, refused to yield to the much greater cause of irritation supplied by numerous stabs of the needle.

I have lately applied the acupuncture to another form of disease in which it is perfectly successful, and which again supplies a recommendation for it as a means which may be relied upon where much artificial irritation is not required for the purposes we have in view. I here allude to the "ganglionic tumours," as they are often called, connected with the sheaths of tendons, and frequently met with on the back of the hand, particularly in those who frequently make use of efforts calculated to strain the textures about the wrist, as laundresses in wringing wet linen, &c.

In several of these cases I have passed a needle through the growth, the point entering on one side and coming out on the other, allowing it to remain in the tumour so transfixed during about five minutes.

When examined about a week afterwards, the swelling is generally found to have entirely disappeared; and it appears in such instances that where the extent of surface to be irritated is not great, the employment of this method, of which its simplicity is, perhaps, its greatest recommendation, answers every purpose required. With regard to the nature of the injection employed in cases of hydrocele, whether with a solution of sulphate of zinc, or with port-wine, it perhaps does not matter much; but to either of these I prefer the injection of a mixture of tincture of iodine and water, as recommended by Mr. Martin of Calcutta, and since employed by M. Velpeau; but I doubt whether as yet we have arrived at the perfection of simplicity and security, even in the operation by injection, and I would suggest, should this not have been done before that an injection of some stimulating or irritating gas, such as oxygen or muriatic acid gas, or iodine vapour, might be worthy of trial; for in this way the danger of infiltrating the cellular texture of the scrotum with a stimulating fluid, likely to cause serious inflammation and sloughing, would, perhaps, be avoided; and this accident more easily occurs than might at first sight be supposed, for the slightest receding, or twist of the body of the patient, may throw the end of the canula out of the cavity of the tunica vaginalis, and in a moment produce the mischief. I do not possess a sufficient history of the after-state of the three cases in the practice of the French surgeons mentioned, to enable me to say what was the ultimate result of the operations.

MEETINGS OF SOCIETIES.

PHRENOLOGICAL SOCIETY.—Feb. 7, 1842, Dr. Elliotson, President, in the chair. Mr. H. Drew presented two specimens of flat-headed American Indians. A gentleman present, who was a phrenologist, and had had an opportunity of studying the characters of the flat-headed Indians and observing their mode of pressure by which this remarkable form of head is effected, gave it as his opinion that the pressure only displaced the organs, without altering the character of the individual. He also remarked that these specimens were very valuable from the great difficulty of procuring them, owing to the extreme jealousy of their dead on the part of the natives, which was so great that eleven

persons had been shot while attempting to procure heads.

Mr. Atkinson read a paper illustrative of the connection between phrenology and mesmerism.

After some preliminary remarks upon the difficulties opposed to the introduction of every new truth by the ignorance and prejudices of the age, by opposing interests, and by pride, originating in the painful feelings of inferiority, and causing the individual to reject all which he does not understand, or which is opposed to his preconceived notions; and, as regards mesmerism, after alluding to the progress of his own mind from painful incredulity to doubt, from doubt to partial belief, and at length to a perfect conviction of the truth of this science, the author continued—"However it may have been inexpedient heretofore to introduce the subject of mesmerism to the Phrenological Society, I agree with Dr. Elliotson, that the subject now forces itself upon our attention, and demands the most careful and patient consideration, unless, indeed, we would shrink from all further investigation of mental phenomena, and be content to remain behind the rest of the world in the advance of intelligence and inquiry. Those who are so content to live upon their capital of intellectual wealth, and chew the cud of old opinions and worn-out dogmas of the imaginary world, which so greatly abound, may do so; I, for one, will not join their ranks, but go forward whenever there is an opening of new facts, find them where I may, lead them to what they will; for if we have not confidence in the ways of nature, or the works of God, there is no other thing we may confide in; and it may not be out of place here to say a few words on the nature of phrenological inquiry. The science of phrenology, or mental philosophy, consisting more directly of inquiry concerning the brain and its special functions, yet entails not only a consideration of the rest of the nervous system, as the communicating medium of sensation, but also of the effect of all external and internal things which in any way influence or alter the nervous system, and in particular the brain, and consequently the functions of the brain, the mind, a matter which I believe is too little considered in our phrenological societies; we confine our observations too exclusively to the organology of phrenology, neglecting the influence of external things, and too often forgetting the end and object of mental science. * * How is it that we have no facts, or but few, with regard to the effect of particular food or medicines on the mind; of different laws, education, training, and other external circumstances; the effects of atmosphere, climate, light, heat, electricity, &c., &c.; and we are now almost constrained to apologise for introducing the subject of mesmerism with all its wonderful mental effects and important revelations, than which perhaps nothing will more advance the march of mental science. * * * With what welcome, then, must we hail any new discovery which at once opens to us a fresh channel of investigation, by which we may correct our views and enlarge the boundaries of our science. I have no disposition for the marvellous; I desire to reduce marvels to plain things, and not to inflate plain things into marvels. Nor can I have any unworthy design or interest in the question. I relate only what nature has revealed to me—the result of experiments always made in the presence of a number of intelligent persons, some of them being at the time strongly opposed both to phrenology and mesmerism. * * There is no doubt remaining in the minds of those who have seen; and I have witnessed the effects under varying circumstances over and over again, repeated for hours, nay, for days, at a time; and I have seen the intelligent sceptic in phrenology become con-

vinced in utter amazement, for to doubt were to doubt one's own existence and to refuse the evidence of all that we most depend on. * * You may conceive the delight with which I witnessed the first display of this important revelation, believing at the time that these effects had not been observed by any other person."

The first case related by Mr. Atkinson, and which also was the first in which he perceived the connection between mesmerism and phrenology, and in which the effect was quite unexpected, he says, and the desire or possibility of doubt quite out of the question, was that of a young lady, 18 years of age, of a sanguine nervous temperament; the head well developed; Ideality, Wonder, and Tune, very large; the perceptive faculties moderate. After being thrown into mesmeric sleep by the operator simply pointing with his extended fingers, without contact, towards the corners of her brows, she appeared as if lost in the enjoyment of an exquisite dream. Her countenance assumed the expression of intense happiness, and, when spoken to, she begged not to be disturbed; "Oh, I am so happy—beautiful—do not—let me alone," &c., and she turned her head round, gently moving and pressing the organ of *Ideality* against the cushion of the back of the chair. * * After a time she leant her head back, and, putting back her hair from over the organ of *Ideality*, began passing her fingers backwards and forwards over those parts, her expression continuing to be a beautiful exhibition of the natural language of *Ideality*. Presently she moved her fingers a little higher over the organ of *Wonder*, and added, "Oh grand, grand," &c. After continuing thus about six minutes, her sister began to play some expressive music, and one of her hands went immediately down to the organ of *Tune*; and, in reply to Mr. Atkinson's questions, she exclaimed, "Oh yes, I hear the music, it is beautiful; it is all part of the picture." After continuing his experiments for about half an hour, Mr. A. awoke her by a few cross passes. She then jumped up, but had no recollection of anything that had passed, except that she seemed to have slept a long time, and had been very happy. She remembered first becoming sleepy, but had had no power to move, although at that time conscious of what was passing around.

The second case was that of Miss H., a lady nearly 20, subject to fainting fits and hysteria. She was mesmerised to sleep the first time in about five minutes, and could not be awakened by the ordinary means, such as shaking, pulling the hair, pricking with a needle so as to bring blood, &c. On the following day she was mesmerised without her own knowledge, the operator standing behind her, sketching as she supposed, and a lady sitting at her side to confine her attention to her work. * * Her eyes being perfectly closed, a book was held before her, from which she read at the urgent desire of the mesmeriser, though with difficulty and considerable reluctance; but the size of the type seemed to make no difference. This experiment was varied, and repeated several times with similar results, and after various other experiments she was awakened in the usual way, and then was totally unconscious of everything that had occurred.

The next case was that of Miss B., who, when mesmerised, read some lines from a book, holding it over her forehead, where she could not have seen with her eyes had they been open. But they were always tightly closed; indeed, she was unable to open them. Mr. A. placed the back of his watch against her forehead; she moved it to the organ of *Time*, and told the hour correctly. A great number of experiments were made upon this young lady at different times. On one occasion she was unable to read

with her forehead after some leeches had been applied to it, and which, she said, was the cause of her inability. She could be sent into mesmeric sleep in spite of her endeavours to resist. The hands pressed heavily on her eyes, and pressing down the lids did not appear to intercept her vision. By picturing different scenes, effects, and feelings, the mesmeriser could excite any of the organs at will, and allay the excitement at pleasure; inducing laughter or tears, joy or sorrow. He could let the faculties dream away themselves, following their own sympathetic course, or lead them from grave to gay, from the pleasure of affection to the desire of destruction, and jump at once to calculate some abstruse problem, or to the pleasure of imagining music. "I pictured to her," says Mr. A., "the effect of a battle, its pleasures and horrors, love, friendship, bright colours, music, &c., and she followed in the most excited manner, passing her hand from organ to organ in rapid succession, in a manner which it would have been impossible for the best phrenologist to have performed in his waking state; for she now used one hand, now both, pressing one or several organs, like a person pressing on the keys of a piano, and stretching out her fingers to cover an excited organ, and if she could not reach it, the other hand would go to it, for generally only one side of her brain seemed to act at once; and I remember that one side was used more frequently than the other, and some organs more generally on one, some on the other, side. She pressed upon the different organs the more firmly as they became the more excited. She would sometimes, as it were, grasp the part with energy, covering one or several organs at once, as they were excited singly or in combination.

Miss B. is about twenty, of a firm frame, bilious lymphatic temperament, the head of ordinary size, the intellect well balanced, the perceptive faculties predominating, but not deep. She had been subject to hysteric faintings and shortness of breath, sleepless nights, fatigue after a short walk, and want of appetite, from all which she has been relieved by mesmerism. Mr. A. added that he had cured numerous other affections by this simple process.

Feb. 21, Dr. Elliotson, President, in the chair. A paper was read by H. Brookes, Esq., of Birmingham, which will be given in our next number.

ROYAL MEDICO-BOTANICAL SOCIETY.—May 25th, H. Cope, Esq., Jun., in the chair. Mr. Rodgers, the professor of chemistry, delivered a lecture on the tests of arsenic, of which the following is an abstract:—

There are two conditions under which we may be required to test for arsenious acid, or white arsenic; in the one we have it pure, either in the solid form or in solution—in the other mixed with organic matter.

When in the solid form, the best mode of proceeding is to mix a small portion with about twice its weight of black flux, and reduce it to the metallic state in a glass tube, with the aid of a spirit lamp. The appearance of the metallic sublimate is most characteristic, but should any doubt exist as to its nature, it is at once removed by the subsequent process of oxidation, as recommended by the late Dr. Turner, when you obtain the arsenious acid in the form of octohedral crystals.

When in solution, and free from organic matter, arsenious acid may be most decisively detected by the three following reagents—the ammoniaco-sulphate of copper, the ammoniaco-nitrate of silver, and sulphuretted hydrogen; the 1st, throwing down arsenite of copper, or Scheel's green—the 2nd, arsenite of silver—and the 3rd, sulphuret of arsenic. Many ob-

jections, however, have been made to these tests, and sources of fallacy pointed out, but it must be remembered that they refer to them *individually*, not collectively, for there is no substance or mixture of substances capable of giving the same coloured precipitates with the above reagents, as is occasioned by the presence of arsenic.

In organic mixtures the detection of arsenious acid is more difficult, and the process may be divided into three stages—in the first, after neutralizing any free acid by means of potass, you separate organic matter by the addition of acetic acid and filtration; first through linen, and afterwards through paper, and when this fails, by evaporation to dryness, by which the organic matter is rendered insoluble, so that you obtain a tolerably clear solution on the addition of distilled water.

In the second stage you pass sulphuretted hydrogen through the solution, and after expelling the excess of the gas by boiling, collect the sulphuret of arsenic and dry it.

The third stage consists in the reduction of the sulphuret to the metallic state and its subsequent oxidation, the process being the same as for the arsenious acid.

By this mode of proceeding Dr. Christison states that the existence of so small a quantity as 300th of a grain of arsenic may be clearly demonstrated.

Of the other modes of detecting arsenious acid two only need be noticed, Marsh's and the test by galvanism. If care be taken that the sulphuric acid and zinc do not contain arsenic, and the process conducted as recommended by Liebig, a more simple, elegant, and decisive mode of discovering the presence of arsenic cannot be used.

The galvanic test was first proposed by the German chemists, who employed a simple apparatus, similar to that used for electrotype purposes, placing the suspected solution in the inner vessel, and a solution of hydrochlorite of ammonia into the outer; they then put a piece of zinc in the outer vessel, and bent a platinum wire (attached to the zinc) so as to dip into the inner; in the course of a few hours the arsenic was deposited on the wire; when a small galvanic trough was used they found the metal deposited more quickly.

Mr. E. Davy has proposed a different method of applying this galvanic test; he recommends the suspected solution, acidulated with hydrochloric acid, to be placed in a platinum vessel with a piece of zinc—the metallic arsenic is then thrown down on the platinum, from which it may be obtained in the form of arsenious acid by the application of heat, and then tested in the usual way.

The above test is not so delicate as those previously mentioned, for Buchner and Pleischl state that only $\frac{1}{10}$ to $\frac{1}{4}$ of the arsenic present can be obtained in this way, and the latter chemist states that in an experiment made for the purpose of ascertaining the delicacy of this test, he could obtain no indication of the presence of arsenic by the aid of this galvanic test while he detected it by a method recommended by Rasc.

The principal source of the loss of arsenic is occasioned by the disposition of that metal to form compounds with hydrogen.

The method of using the galvanic test lately brought forward by Capt. Powell and Mr. H. Reeve, where the arsenious acid is combined with potass, and copper electrodes employed, is (if the deposition of the metal be alone regarded) subject to more objections than the other methods; for the arsenic is present in a salt, and as the *electro-negative* component of that salt, it is, by the primary result of the electric power, forced to the positive electro-

type, while it is required to be present at the negative to be reduced by the latent hydrogen.

That this actually occurs is proved by the formation of arsenite of copper on the positive electrotype; indeed, this occurs when there is no deposition of the metal on the negative, and is in fact a more delicate test, although its value appears to be lost sight of. In addition to the loss of arsenic by the formation of the arsenite of copper, there is still the loss occasioned by the formation of the arsenients of hydrogen. This method, although an extremely elegant experiment, cannot therefore be regarded as calculated to supersede Marsh's or the other methods of detecting arsenic that have been mentioned.

CHURCHES AND BURYING IN CHURCH YARDS.

It was stated in our last number, that a most salutary Act of Parliament is likely to pass during the present session, by which the custom of burying in churches, church-yards, and even within the precincts of cities and towns, will be for ever abolished in England. The practice of burying in church-yards began among the Christians of Europe in the year 309, being a departure from the ancient method of burying by the sides of highways, and in cemeteries far removed from inhabited places. The reason alleged by Pope Gregory the Great for this innovation, was that "*Relatives and friends, remembering those whose sepulchres they beheld, might thereby be led to offer up prayers for them*;" hence the striking and solemn address which distinguished the epitaphs of these pious ages—"Orate pro anima miserimi peccatoris." To Gregory's "reason," which soon became part of the canon law, as well as to the profit arising from the custom, we have to ascribe the regular attachment of graveyards to all churches; which practice was introduced into England by Cuthbert, Archbishop of Canterbury, in the year 740; from which period until the present, the whole direction of such matters seems to have been left to the direction of the bishop of each diocese. The practice of erecting vaults for dead bodies, in chancels and under church altars, was begun by Lanfranc, Archbishop of Canterbury, when he rebuilt that Cathedral, in the year 1075; until which period, no persons, however great their rank, were buried in churches in England; unless removed thither on account of their extraordinary sanctity, and in order to be reputed and worshipped as saints. Such was the case in regard to the body of Queen Edithreda, or Saint Awdry, who died of pestilence, A.D. 669; although buried full twenty years before, she was translated into the church by her sister, viz., in 689. The venerable Bede informs us, as a further instance of this kind of canonization, that Saint Chad, Bishop of Lichfield, was first buried near the Church of St. Mary; but, when St. Peter's Church was built, his bones were removed thither, agreeably to the canon of King Edgar, which enjoined that, "*No one should be buried in a church whose life had not been a goodly one*."—In the course of time, the founders and patrons of churches, as well as other wealthy personages, crept as near to the sacred fabrics as possible; and some were even laid in the church porch; some in the *entry* to the *cloisters*; others in the *cloisters* themselves, before the *Chapter House*, and others in the *Sacristy*. Pursuing their pestiferous inroads on the health of the living, our ancestors now began to deposit dead bodies in the *church walls*, first on the *outside*, and then on the *inside*; and, in the course of time, they formed *aisles*, in which they established *chantries*, where they buried

their departed relatives. One step more, and they made free with the *body* of the church; and lastly, since the Reformation, they have had recourse to the *chancel*, and to the erection of vast ranges of vaults and catacombs under the altar, as well under as the whole basement of the sacred edifice; thereby transforming the temple of God, the house of prayer and holy fervour, the tabernacle of heavenly gladness, into a nursery of disease, and a pesthouse for the living!

COLIN MACKENZIE.

CASE OF POISONING BY SULPHURIC ACID.

To the Editor of the 'Medical Times.'

SIR,—If the accompanying case of poisoning by sulphuric acid possess sufficient interest, I shall feel obliged by its insertion in the 'Medical Times.'—I am, Sir, your obedient servant,

J. SCOFFERN, M.D.,

Lecturer on Chemistry at the Aldersgate School of Medicine.

13, Alfred Place, Brompton, May 24, 1842.

On Friday morning, 20th instant, I was called in by Mr. Harness, a general practitioner of Brompton, to visit Jane Speller, a servant girl, residing at No. 1, Pelham Crescent, Brompton, who was supposed to have taken poison. On my arrival, I found her lying on the floor of her bedroom, with a black frothy matter issuing from her mouth; her extremities exceedingly cold; pulse almost imperceptible; breathing laboured and irregular. Her cap, and some other articles of dress, were stained with black marks, similar to those produced by sulphuric acid. I immediately ran to the kitchen, procured a quantity of whitening, which I mixed with milk, and administered copiously. After this treatment she rallied considerably; a copious vomiting of streaky mucus supervened, and, by the aid of stimulating embrocations, warm bricks, &c., the extremities were brought to the natural temperature.

Further treatment, 2 o'clock. A.M.—Small quantities of mutton-broth and arrow-root were given by a teaspoon, at frequent intervals; and the following injection was administered:—

R. Jusculi Ov. ʒij.; Tinct. Opii, mx.

M. ft. enema statim injiciend.

Shortly after the administration of this enema, there was discharged about a pint and a half of black grumous matter, perfectly neutral as it regards the test of litmus paper.

The mutton-broth and arrow-root were returned almost immediately; but the yolk of an egg, administered in the entire state, was retained.

4 o'clock, P.M.—Rept. enema.

R. Tinct. Hyos. ʒij.; Cetacei, ʒij.; Vitell. Ov. Rec. tere bene in mortario; misce cum q. s. Aq. Cinnamon.; Ad lagenam, ʒvj. implend. de qua capiat ægra cochleare magnum partitis dos, omn. hor. 2.

This enema, like the last, caused a copious discharge of black foetid matter, and afforded so much relief that it was determined to persevere in the treatment. The mixture, however, did not afford the relief anticipated, and, therefore, was not persisted in.

6 o'clock.—Breathing and swallowing more easy; but the stomach still in an intense state of irritation, rejecting everything; violent desire for cold drinks; pulse nearly imperceptible.

V. S. ad uncias iv.

Blood, at first, flowed with difficulty; afterwards more readily. Under this treatment the pulse became more full.

8 o'clock.—The patient now slept, on the whole, soundly; breathing not very difficult;

occasionally she was awakened by violent fits of coughing.

I remained with her all the night, and did not remark any manifest change of symptoms. About five o'clock on Saturday morning, she spoke to me, regretting the act she had committed, and hoping that her life might be saved. The same desire for cold mucilaginous drinks remained, and was freely gratified.

Saturday morning, 10 o'clock.—The administration of another enema was thought desirable, and was attended with a marked improvement in the general symptoms.

2 o'clock.—Great pain over the epigastric region, increased on pressure; general symptoms of severe gastritis; to relieve which, there were ordered—

Hirud. xvij., followed up by an application of hot turpentine.

She now rallied considerably, and was rather disposed to become loquacious; her mental faculties entirely perfect.

6 o'clock.—Increased difficulty of breathing, to relieve which was ordered,

Cataplasm sinap. fimbriis externis applicend.

This measure, however, was not followed by any amelioration of symptoms; on the contrary, the pulse became still more imperceptible; the breathing more difficult. She sank deeper in the bed, snatched at imaginary objects, and betrayed an alarming restlessness.

R. Tinct. Opii. mxv.; cum pauvillo mucilaginis et vini xerici administrand.

This produced a state of rest, from which she did not awake until half-past three. About this time I saw her; she described herself as free from all pain, and as having passed a comfortable night. At her request I gave her a little arrow-root from a tea-spoon, which she partook of with avidity, occasionally uttering epithets of satisfaction; then suddenly ceasing to swallow, as if desiring a little rest, she sunk back upon the pillow, and died without a struggle.

Sectiocadaveris.—Yesterday evening, in compliance with the coroner's warrant, I instituted a post-mortem examination, the appearances developed by which were as follows:—

Lips, excoriated, and much blackened; œsophagus congested, and also blackened; cardiac and pyloric ends of the stomach intensely inflamed, blackened, and excoriated; middle portion of the stomach not so much affected; duodenum slightly affected; all other portions of the intestinal tube nearly filled with catus; kidneys very much inflamed *exerting an acid reaction on litmus paper*; left ovary contained a corpus luteum; right ovary a clot of blood; uterus, about the ordinary size, somewhat congested, and containing some purulent or mucous fluid adhering to its mucous membrane.

Chemical analysis.—As a matter of curiosity I analysed a minute portion of the cap, which bore evidences of the poison, and found the results to be most satisfactory. Distilled water, in which the piece of linen alluded to had been digested, copiously precipitated chloride of barium and another piece of cap, on being treated in a test-tube, gave off an abundance of sulphurous acid gas, evidenced by the blue colour produced on transmitting it through a mixture of iodic acid and starch. This latter test I consider to be more available than any other for the purpose of discovering sulphuric acid in organic mixtures. Finding that the kidneys, when cut into, afforded a fluid which reddened litmus paper, I was anxious to see whether I could obtain from them evidences of sulphuric acid; this question I settled satisfactorily in the affirmative by means of Devergie's test, just alluded to; thus demonstrating its great value, and supplying an interesting fact to the physiologist.

MEDICAL MEMS. OF THE WEEK.

By PERISCOPICUS.

SALIVA.—Dr. S. Wright, of Birmingham, says, when we consider the size and number of the salivary organs, the connection of their situation with their services, their increased activity during and subsequently to a meal, the rapidity with which their secretion is altered, both in character and quantity, as the necessities of the stomach may indicate, the influence which this secretion is capable of exerting upon animal and vegetable substances, and the injury which the system sustains from its disorder or its loss, we are at least justified in the inference that saliva contributes not unimportantly to the sum of those functions which are the basis of animal and organic life; and, from the experiments I have recorded, we may venture to classify the uses of the saliva in the animal system, under the heads of active and passive, as in the following arrangements:—*Active*, 1, to stimulate the stomach and excite it to activity by contact; 2, to aid the digestion of food by a specific action upon the food itself; 3, to neutralize any undue acidity in the stomach, by supplying a proportionate alkali.—*Passive*, 1, to assist the sense of taste; 2, to favour the expression of the voice; 3, to clear the mucous membrane of the mouth, and to moderate the thirst.

RESPIRATION OF BIRDS.—Dr. Marshall Hall observes, in the new edition of M. Flourens's admirable work, an account is given of an experiment in which the cerebrum and cerebellum being removed, and the pneumogastries divided in a pigeon, the respiration still continued. Now, it is well known that the respiration in birds, as in insects, is *diffused*. It is ascertained that the different segments of the insect possess distinct nerves and nervous centres (analogies of the medulla oblongata) for respiration. This is not the case with birds; but, first, if the air-cells throughout the body be like those of the lungs, supplied with nerves; second, if these nerves be derived from the spinal nerves, like the other nerves of the general frame; and, third, if these spinal nerves possess the *excitor* property of the spinal nerves in other animals; if these things be, then the result of the experiment is precisely what the theory of the reflex nature of the respiratory acts would have led us to anticipate. When, in mammalia, the cerebrum and cerebellum are removed, the respiration continues as a purely reflex action, exerted principally through the medium of the pneumogastric nerves; when these are divided in addition, a few and rare acts of respiration occur from the influence of the trifacial and spinal nerves. In birds, these spinal nerves are as really exciters of respiration as the pneumogastric itself; under their sole influence, therefore, respiration may continue for hours. A series of experiments illustrative of the relative value of each of these parts of the nervous system would be highly valuable. There is no reason, from any facts which we yet possess, to think that the medulla oblongata is the *primum* mobile of respiration; as the *secundum* mobile, the key stone of the reflex arch, its office is most clearly established.

SYPHILIS.—The following opinions are entertained by Mr. S. Lane respecting the origin and history of this disease, viz.:—That the venereal disease existed centuries before the siege of Naples, not only in South America, but in all parts of the world wherever sexual intercourse, unrestrained by religion or the customs of society, was carried to great excess; that it first originated, and could we destroy the whole existing virus, would again appear under similar circumstances. Syphilis is one of the contagious animal poisons transferable by inocula-

tion, capable of reproducing itself like small-pox, or cow-pox, followed, as in these diseases, after a certain interval, by a primary effect at the point of insertion of the poison, and at a subsequent period by secondary or constitutional symptoms, which in syphilis affect the skin, the throat, the eye, the nose, the palate, the fibrous and the osseous tissues. In the small-pox and cow-pox, the secondary or constitutional effects are confined to the tegumentary membrane, and resemble precisely, both in appearance and in contagious property, the primary focus of the poison; but in syphilis, the secondary or constitutional affections differ widely, not only in external characters from the chancre, or primary local symptoms, but they have lost the characteristic property of transmitting the disease by inoculation. Syphilis, like small-pox and cow-pox, having passed through its different stages, will disappear spontaneously; the system, however, in syphilis, is left as susceptible as ever to future attacks. The secondary symptoms of syphilis, though not transferable by inoculation, are communicable through the blood of the mother to the fœtus in utero; one form also of the secondary disease, namely, condylomata or mucous tubercle, appears to possess the power of spreading the disease, if not by inoculation, by contact of surfaces, and thus holds an intermediate position in its characters between the primary and secondary affections; or this peculiarity may be considered as presenting a still greater point of resemblance between the laws regulating the poison of syphilis and those of small-pox and cow-pox, in which latter the matter resulting from the secondary disease is precisely similar to that which has been originally inserted. In syphilis, the secondary affections do not necessarily and invariably succeed the primary; the average number of cases in which they do present themselves, where no mercury has been administered, appears to be about one case in ten, and where this remedy has been had recourse to, not more than one in 175. The entire succession of the secondary symptoms, as above enumerated, is extremely rare, the ordinary run of cases only presenting the affections of the skin and throat, accompanied, perhaps, by pains in the limbs. The bones and fibrous tissues usually escape, especially where no mercury has been given. In small-pox, the secondary eruption is almost invariable, although the quantity of the pustules varies much in different individuals. In cow-pox, on the contrary, they very rarely occur. In the two latter diseases, the period which intervenes between the appearance of the primary and secondary pustules is much shorter, and less subject to variety. In syphilis, great irregularity will be observed in this respect; and treatment, especially by mercury, will be found to possess a considerable influence over the period at which these symptoms occur, and will frequently entirely prevent them. Certain of the secondary syphilitic affections are generally associated together, as the pains, eruptions, and ulcers of the throat, to which is occasionally added iritis; a considerable interval is usually found to intervene between the above-mentioned affection and those of the bones and joints, so much so that some pathologists have termed these latter the tertiary symptoms of this disease; another reason for so classifying them, is founded upon the notion that the former can alone be transmitted by the mother to the fœtus in utero. This, however, is not established, for Merklings mentions a case in which the fœtus, examined in utero post-mortem, was found to be affected with secondary syphilis, and the bones presented in various parts osseous projections. The mother was labouring under secondary symptoms at the time of her death, which occurred sud-

denly from accident. The affections of the bones and joints, though forming a third order of symptoms, are frequently attended by those of the second series; these latter having been either persistent, or having re-appeared after a first subsidence. So that, together with affections of the bones and joints, ulcerated throat, cutaneous eruptions, iritis, &c., will occasionally be present. It very rarely, however, occurs, that the third order of symptoms appear without having been preceded by the second. The interval occurring between the insertion of the poison and its reproduction in the inoculated part in syphilis, is from four to seven days; longer or shorter intervals are to be looked upon as irregularities. Mr. Hunter mentions, as extreme periods, twenty-four hours and seven weeks; this latter period will probably be found to refer to the application of the poison to the sound cuticle, and not to its insertion into the living tissues, the abrasion of the cuticle upon which venereal matter may have been deposited being necessary to its absorption. The period of reproduction, or in other words, the duration of the primary ulcer, without reference to extreme cases, appears to be from thirty to forty days. The second series of symptoms usually make their appearance, if at all, in from six weeks to three months after the cessation of the primary; the tertiary affections of the bones and joints in from three to six months. The effects of the poisons of small-pox and cow-pox are more constant and determined in the periods of their appearance and duration, and are much less under the control of treatment than we find is the case of syphilis.

PORTAL CIRCULATION.—Dr. R. Willis has thrown new light on the intention of nature in the portal circulation. Why has she departed so singularly in this part of the body from the ordinary mode of circulation in general? There is no sufficient reason for supposing that the blood from the intestines contains more of the elements of bile than that from other sources; and moreover it happens that occasionally the portal system is found absent, and yet bile is continued to be secreted. Reptiles and fishes have actually a portal system of the kidneys, as well as one of the liver. It appears to be, as Dr. Willis states, "a most admirable contrivance to economise arterial blood." Carbon, it will be remembered, is highly pernicious to the system, and therefore requires an extensive apparatus to get rid of it—the whole mass of blood must be passed through the lungs with great rapidity for this purpose; the superfluous carbon is thus "literally burned out"—but urea and bile are not so pernicious as to require this hasty departure from the blood, and therefore only a part of the blood is required to be circulated at a time through the kidneys and liver. If it had been necessary to supply so large a viscus as the liver with arterial blood for the purpose of freeing it of the bile, it would have required a vessel "of the calibre equal to the sum of the vessels whose contents are finally collected into the portal vein." But nature proceeds more economically—she first makes use of the blood to supply and vitalise the viscera, and then sends it to the liver, where, although perhaps useless as a vivifying fluid, it is still able to yield the bile if subjected to the elective affinity of the liver.

CHRONIC HEPATITIS.—Dr. Benson, of Dublin, says venesection is seldom necessary, but local bleeding is always good. Small cuppings or leechings ought to be practised every second or third day, so long as much local tenderness or tumefaction continue. When the tenderness subsides, and the fever is pretty well reduced, we shall find it very useful to apply small blisters every two or three days along the hypocondriac region, and the epigastric too.

After the blister is taken off, a large poultice of linseed-meal is often found very agreeable. There is no necessity for active purging, but the bowels ought to be kept in a free state, as there is a tendency to constipation, and a retention of the secretions. Every night may be given two grains of calomel or four of blue pill, with six of the compound extract of colocynth, and every morning a little Rochelle or Epsom salts in infusion of cascarrilla or infusion of roses. The diet must consist of light and easily digested vegetable matters of the farinaceous kind, and drinks of soda water, whey, tea, barley water, cream of tartar, &c. After the leeching aperient and lowering plans have been used for a week or ten days, the mercury may be increased until slight salivation is produced. This will remove the enlargement, and render it less likely that chronic enlargement or any organic disease should supervene. The nitro-muriatic acid I have seen very useful in chronic diseases of the liver, especially in cases where you do not wish to give mercury, or when you have already gone far enough with that drug. An ounce and a half of the acid, mixed in a gallon of tepid water, is to be used as a foot-bath every night for about twenty minutes, and if it do not produce a prickly sensation, the strength may be increased.

MORAL TREATMENT OF THE INSANE.—Dr. M'Kinnon, in Report of Edinburgh Lunatic Asylum, asks, in what does the moral treatment consist? It may be said to consist in encouraging habits of self control; in gently exercising the faculties of the mind, especially those not involved in the disease; in affording scope for the pursuit of useful employments; in gratifying innocent tastes, and bringing to bear on excited feelings and eccentricities the influence and example of sound minds. For prosecuting such treatment, something more is required in an asylum than provisions for the safe keeping of its inmates. The scholar should have his library, the artist his studio, the agriculturist his farm, the artisan his implements and every one society, and the means of recreation and amusement. Opportunities should be afforded for the inmates leading, so to speak, a rational life. An epitome of the world without should be presented to them, wanting as much as possible the sources of agitation and excitement in operation there. I have endeavoured to keep these objects steadily in view. The inmates have been encouraged to engage in such pursuits as were congenial to their tastes; and already that system of in-door occupation has been begun, which, I trust, will form a conspicuous feature in the extended establishment. In excursions to the country, visits to public places, and to relatives at home, efforts of self-control, have been beneficially called forth; meetings of the inmates for various purposes have been held, where the influence of example, and the restraining effect of society, have been exemplified. I allude to the daily attendance in chapel, to concerts, to meetings of a convivial nature, and to others in the winter evenings, when, with the aid of a magic lantern, some information on interesting subjects and no little amusement was afforded. Daily religious services might at first appear open to the objection, that as religion is the cause of insanity in some, and is the subject of delusions in others, it ought not to be made a frequent subject of attention in an asylum. But experience leads us to draw a distinction between the effects of it presented to the inmates as a body, and as individuals it may be advantageous and certainly not hurtful, to place them in conditions where a certain restraint must be imposed on their demeanour, and religion is exhibited simply as the page of truth exhibits it, while it might prove positively injurious to attempt by argument or reasonings

however cogent, addressed to individuals, to combat their gloomy or perverted views. Attendance in the chapel forms an epoch in the day, it tends to give a new current to thoughts usually morbid, and it is not to be forgotten that there are among the inmates of an asylum those who entertain the justest views of religion, and are therefore entitled to the enjoyment of all its privileges. Every day is adding to the triumphs of moral over physical restraint, in the treatment of the insane. Whether we are yet prepared to dispense with the latter—in the sense of personal restraint—in all cases, I do not presume to determine; to diminish its amount is, however, now the object of all engaged in the treatment of the insane, and, as in other cases, it is by the accumulation of facts, and the details of varied experience, that correct views are to be acquired on what still remains disputed regarding it. For eighteen months I have not considered it necessary to use personal restraint on any occasion during the day; in one case, (a suicidal patient) I have been reluctantly compelled to make use of it during the night; but, with a large staff of attendants, or a building constructed on the plan of the new establishment, I would have been enabled to dispense with it even in that instance.

STRANGULATED HERNIA.—Mr. Webber, of Oxford, Suffolk, observes in a case of strangulated hernia, that he had determined to proceed to the operation, when the idea of passing the elastic tube per anum, as recommended by Dr. O'Beirne, suggested itself, and he resolved to give this plan a trial before resorting to the knife. He continues, a common enema having been previously administered, I introduced the œsophagus tube of Weiss's stomach-pump, with tolerable facility until it arrived (as nearly as I could judge) at the sigmoid flexure of the colon, where it encountered some degree of resistance, which yielded however in a short time to moderate pressure, after the injection of a little cold water. The tube was now passed gradually up until its whole length, about twenty-five inches, had been introduced, the brass extremity alone remaining without. After waiting a quarter of an hour, between two and three pints of water were thrown up and retained in the bowels for a short period; the cylinder of the pump having been unscrewed from the elastic tube, and the mouth of the latter closed by the thumb, on withdrawing which the fluid passed in a jet of considerable force. The cylinder was now readjusted to the tube, and the action of the machine being reversed, the piston was worked rapidly, with the view of producing a degree of exhaustion or partial vacuum in the intestine; gentle taxis was at the same time resumed, and after the expiration of four or five minutes, I had the satisfaction to feel the contents of the tumour recede from beneath my fingers, and slip into the abdomen with the usual gurgling which accompanies the return of the intestine. He is disposed to attribute the successful result of this case, in a principal degree, to the production of a partial vacuum in the intestines immediately below the seat of strangulation, by the exhausting process, that being the direct agent to which the obstruction appears to have yielded; and he is induced to recommend a trial of this measure to the profession as an adjuvant to that valuable instrument the elastic tube, in cases where the latter alone may prove inefficient. He considers that no surgeon is justified in proceeding to the operation for strangulated intestinal hernia, without giving a fair trial to the measures above alluded to.

PULSATIONS OF THE FŒTAL HEART.—The stethoscope will afford an extensive range of practical observation. The ear, like the other senses, requires practice to discriminate. A musician will detect a discord which would es-

cape the uneducated ear; and thus you will not be disappointed if you find it difficult in your first attempts to distinguish the uterine from other similar sounds which may be heard in the abdomen. Persevere, and you will soon find that your time has not been misspent, in the readiness with which you will detect the placental murmur and pulsations of the fœtal heart. You have then established not only an evidence of the life you are about to aid in bringing into the world, but you have opened for yourselves a new field, from which you can glean many interesting facts. The action of the fœtal heart before and subsequent to its respiratory life, the fœtal as compared with the maternal pulsations, the variety in the positions of the placenta, may all be ascertained; and though you may not at once perceive the immediate utility of such experiments, you will hereafter find their value in determining questions connected with the general physiology of the circulation, as well as with practical midwifery. The large arteries of the abdomen, when compressed, produce a bruit which you will soon distinguish from the placental soufflé. The pulsations of the maternal heart heard through the abdomen have been confounded with the fœtal; your practised ear will detect these and other sources of deception.—*Professor Murphy.*

ERGOT OF RYE should never be used when nature is competent to a safe delivery. It should never be administered until the regular pains have ceased, or are ineffectual, and there is danger to be apprehended from delay. It should never be administered until the rigidity of the os uteri has subsided, and perfect relaxation induced. It should never be administered in any case of preternatural presentation that will require the fœtus to be turned.

CALCULUS.—Professor Porter observes, vesical calculi are, for the most part, formed in the kidney; this seems to be sufficiently established by experience, and by the fact of stones of various sizes and forms being found on dissection of these organs, besides that an examination of their structure will easily explain the great probability of such an occurrence. Secreted from the emulgent vessels, the urine passes with tolerable freedom through the calices and infundibula into the pelvis of the kidney, a large pouch, very large in comparison with the duct that is to carry it off, and in which (supposing it to be full) the fluid must be delayed a considerable time before it can all pass through the ureter. If we imagine the urine to be loaded or saturated with sabulous matter, or if its passage is delayed by spasm or by any mechanical cause, or if, from any other reason, there exist a tendency or disposition in the urine to form a deposit, there seems to be every facility prepared for such taking place in the pelvis of the kidney. If urine passes without any tendency to decomposition into a healthy bladder, I cannot well understand why a change should be thus effected in it, and if such change did take place, it should rather be a general precipitation of amorphous sand, capable of being washed away, on the organ being emptied, than the aggregation of these particles into one solid lump or mass. But the effect of the pressure of any foreign body as a nucleus in causing such aggregation is familiarly known; it may be illustrated by the treatment of a saturated solution of almost any salt; and is proved by the formation of stones around substances accidentally introduced into the bladder, which would never have been constructed had not some such casualty occurred; I am, therefore, disposed to believe, that the nucleus, in the great majority of instances, is formed in the kidney, the calculus built up within the bladder, and, without reasoning on

the subject, morbid anatomy furnishes abundant evidence of the frequency of calculous formations in this locality in which I place their origin. These are sometimes small and inconsiderable like grains of gravel, sometimes large, and assuming the shape of the parietes of the pelvis, and sometimes of an immense size, branching off through the different cavities of the organ, and modelled into their shape, so as when removed and cleaned to resemble irregular masses of discoloured coral.

MINER'S ELBOW.—Mr. Gurney, of Camborne, Cornwall, says, in the mining district, this fluctuating tumour at the posterior part of the elbow-joint is of frequent occurrence, from the posterior part of the elbow-joint being bruised, the bursal sac becomes inflamed, and an effusion of serum follows. Its cause and treatment is the same as the housemaid's knee, which is this: in the early stage, tepid bathing with water, and a warm bread and water poultice, three times a day; after the inflammatory action is subdued, the dispersion of the fluid should be accomplished, either by the application of about half a drachm of the hydriodate of potass and iodine ointment combined; or, of a lotion of two drachms of tincture of iodine to an ounce of rectified spirits of wine; to be used in drachm applications over the tumour three times a day. The same treatment will cure the housemaid's knee.

VARICOSE CRURAL VEIN.—An interesting case is narrated by Dr. de Castella, of a coachman, who presented the symptoms of strangulated hernia, under which he sank. He positively asserted he never had a rupture, in which statement he was confirmed by the results of a careful examination of the rings. On examining the body, Dr. de Castella was startled on perceiving a round, pyriform tumour, larger inferiorly than superiorly, occupying in the left groin the situation of crural hernia. It was about two inches long and one high, elastic, and of a brownish colour. He immediately proceeded to operate as for hernia, and the result was, that he discovered the tumour to be a varix of the crural vein, which was obliterated under Fallopius' ligament. There were several smaller varices in the internal part of the thigh and leg. The Doctor's alarm arose from his belief that he had mistaken a case of hernia. The cause of death was peritonitis, from cancer of the rectum. The varix may be distinguished from crural hernia by its shape, which is pyriform, or pedicular, as it were, by its fluctuation and colour, and by the presence of other varices in the course of the crural vein. The hernia is globular, hard, and more closely applied to the crural arch. Petit mentions a case where a similar varix was mistaken for a hernia.

FISSURE OF THE RECTUM.—A lady, 30 years of age, suffered for two years from a most painful fissure, about an inch long, situated in the posterior paries of the rectum. Defecation was exceedingly painful, and during the last six months of that time, she experienced a sensation of burning, and troublesome pulsations in the part, for three hours after each evacuation. Opiate enemata, and belladonna applications, had been had recourse to with only momentary relief. Messrs. Bretonneau and Trousseau prescribed simple lavement, to be followed, immediately after it had been returned, by one composed of four scruples of extract of ratanhia, one scruple of alcohol, and 120 of water. Each day this was used the patient was enabled to retain the enema a longer time, and there was progressively less pain during and after each evacuation. In sixteen days the patient was completely cured. The extract of ratanhia lavement was administered once a day.—*Bulletin Général de Thérapeutique.*

RE-UNION OF THE FINGERS.—M. della Fanteria attended a girl who had two fingers cut off by accident. He found the fingers in some bran, in which they had fallen; but, to his great surprise, they were both cut into two pieces. He, nevertheless, determined to re-unite them to the hand, which he effected by strapping and sutures. At the end of a few days union was perfect, and the girl thoroughly recovered the free use of her fingers, the articular motions continuing. This case is verified by the celebrated Vacca, and by Professor Centofanti.

HERNIA.—Three patients have lately been successfully operated upon by Mr. Liston, at the University College Hospital, for strangulated femoral hernia, without opening the sac.

COPAIVA.—For some time past it has become fashionable in Britain to use what are called specific solutions of copaiva. They are commonly made with solution of potash and spirit of nitrous ether, and the following is a convenient formula in use in this city:—Boil gently for fifteen minutes, two ounces of copaiva with two ounces and a half of aqua potassæ; add, when nearly cool, an ounce of spirit of nitrous ether; and when the mixture has been at rest for twelve hours, remove the intermediate liquid from the soapy sediment which falls, and the lighter fluid which floats on the surface.

MEETINGS FOR THE ENSUING WEEK.

- Mon. Botanic Gardens, Chelsea, 9 a.m.
— Entomological Society, 8 p.m.
Tues. Linnæan Society, 8 p.m.
— Horticultural Society, 3 p.m.
Thurs. Royal Society, half-past 8 p.m.
Frid. Botanic Gardens, Chelsea, 9 a.m.
— Astronomical Society, 8 p.m.
— Royal Institution, half-past 8 p.m.

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COURSE OF CLINICAL LECTURES ON PNEUMONIA.

Delivered at the Hospital La Charité, by Professor CHOMEL.

LECTURE XIX.

Pneumonia complicated with Pseudo-membranous Bronchitis.—Sometimes pneumonia complicates itself with pseudo-membranous bronchitis, and vice-versâ. We find in the *Memoires de l'Académie des Sciences*, 1762, a very curious case related by Marcorelle and Barthès. A female of Narbonne, attacked with a bronchial catarrh, expectorated a ramified substance three inches in length. On examining it very attentively, they discovered that not only was this substance hollow to its ultimate ramifications, but there were also found, at the extremity of these ramifications, some inflated vesicles distended with air which they judged to be the pulmonary cells; these gentlemen believed that this body was simply the internal membrane of the bronchi, detached by erosion. In a remarkable case cited by Dr. Caseaux, pseudo-membranous bronchitis characterized by the expectoration of tubular concretions, became complicated, towards its termination, with symptoms of pneumonia, such as dulness on the lower and posterior part of the right side, with crepitant râle; but they quickly disappeared under the influence of an antiphlogistic treatment. In general pseudo-membranous bronchitis is rarely followed by pneumonia; but we shall see, when speaking of that form of pneumonia which often accompanies epidemic catarrh, that it is not uncommon to meet with false membranes in the ultimate bronchial ramifications.

4thly. Acute pneumonia often complicates itself with chronic bronchitis. It is especially in old men that we observe this kind of complication which may be easily overlooked. In fact, if the pneumonia be but slight or little extended, percussion furnishes no intelligence; the crepitation or bronchial respiration will be masked by the mucous râles; the sputa offer only the characters of chronic catarrh, and we have merely the appearance of a more or less intense febrile movement, and of an unusual state of dyspnoea to guide us in our diagnosis. M. Andral, who has dwelt in a particular manner upon this form of complication, examples of which he has often met with, justly lays great stress on the importance of ascertaining the existence of the pneumonia; for, if this complication were overlooked, we might be inclined to regard the dyspnoea as the result of the presence in the bronchi of the catarrhal sputa; we should thence seek merely to facilitate expectoration, often by means of tonics; abstraction of blood would appear contra-indicated, and the patient would run the greatest danger. Before percussion and auscultation were known, *suffocative catarrh* was no doubt frequently mistaken for that form of pneumonia which arises suddenly in the course of acute or chronic bronchitis of some considerable extent; it is especially in children and old people that one is apt to commit this error. When pneumonia supervenes in the course of *hooping-cough*, it is announced by the ordinary symptoms; but the fits

of coughing are less frequent and of a stifled nature, reassuming their original intensity on the decline of the pneumonia.

Pneumonia complicated with Hæmoptysis.—If we consider the great quantity of blood which flows towards an inflamed lung, if we reflect, also, that the lung in this state obstructs the passage of the blood from the right to the left side of the heart, forcing the right cavities to contract with greater energy, we shall have reason to be astonished that hæmoptysis is not of frequent occurrence throughout the whole stages of pneumonia. But such cases are very rare; I will therefore relate the following observation of Dr. Peteaux.

M. * * *, about 45 years of age, of a very robust constitution, having never previously been ill, had been in the hospital at Dunkirk about a fortnight, when he presented at first the symptoms of acute gastritis, which were attributed to the use of a violent quack medicine given him for a gleet, with which he had been for some time affected. After eight days, there supervened all the signs of acute pneumonia, the most remarkable of which were shown in the expectoration; the sputa accompanying the cough being at first clear and viscous, and then rusty-coloured and sanguinolent, as in ordinary pneumonia; but four or five days after the invasion of the disease, there arose so copious an attack of hæmoptysis, that the patient threw up whole mouthfuls of red and frothy blood, of which, according to the nurse, he vomited in an instant more than a pound. This hæmorrhage, however, ceased, without affording any relief; but, on the contrary, the man appeared every moment as though about to be suffocated with the intensity of the dyspnoea under which he laboured. On the next day, he expectorated a large quantity of a fibrinous and firm substance, having an arborescent appearance, and forming hollow tubes, similar in arrangement to the bronchi, whence they were ejected; they were formed of a substance similar to that so often found in the cavities of the heart and large vessels. After this expectoration, the patient appeared relieved; his respiration became more easy. In the night, however, the dyspnoea returned, but unaccompanied by hæmoptysis, and the patient died the following day. The whole left lung was found in the second stage of inflammation, the right was engorged with a very large quantity of sanguinolent and frothy serosity; its tissue was of a deep red colour; it was evidently in the first stage of pneumonia. There was, also, at its upper part, a purulent collection of the size of a pigeon's egg, considered to be a tubercle in the state of suppuration; it was surrounded by indurated pulmonary tissue. No ruptured vessel was discovered capable of giving rise to the hæmorrhage. The lesser curvature of the stomach presented a vascular turgidity. The other organs were sound.

It is impossible to say whether the pulmonary abscess in this case was simply purulent or tuberculous; but the absence of tubercles in the other parts of the organ, and the circumstance that hæmoptysis is very rare in the case of isolated tuberculous cavity, induce me to believe that the hæmoptysis in this instance was rather symptomatic of the pulmonary inflammation than of the possibly tuberculous cavity which was seated in the lung.

VII. *Pneumonia complicated with pulmonary Edema.*—When pneumonia is complicated with pulmonary edema, two especial circumstances may occur; sometimes the inflammation and the edema occupy the same portion of the lung, constituting, properly speaking, *œdematous pneumonia*, similar to the œdematous inflammation of the limbs; we then observe a close combination of the characteristic signs of both affections. Thus we find the crepitant râle of pneumonia become moist and unequal, the sputa less viscous and streaked with blood, but more serous, &c. A different case

occurs where the pneumonia is circumscribed, together with the existence of very extended pulmonary œdema; this is an important condition to point out, since we might attribute the dulness and rather humid crepitation of œdema to the pneumonia, and thus gravely deceive ourselves as to the extent of the latter disease. Several circumstances will, however, aid in clearing this obscure point of diagnosis. In the first place, the slight intensity of the general symptoms and of the disturbance of the respiration, contrasted with the great extent which we should be disposed to attribute to the inflammation; secondly, and this is an important remark, pulmonary œdema almost constantly occupies both lungs at the same time, and on feeling, in the lung free from inflammation, the signs presented in a portion of the partially inflamed lung, we shall be less inclined to attribute to inflammation in one lung the lesion which we know belongs to simple œdema in the other.

VIII. *Pneumonia complicated with Pulmonary Emphysema.*—When pneumonia supervenes in a subject affected with pulmonary emphysema, it may be very difficult to ascertain its existence, even in its second stage; in fact, the sonorousness of the chest is scarcely diminished, and sometimes even presents its natural condition, by reason of the almost tympanitic sonorousness of the thorax in simple emphysema; the crepitant râle, also, is distinguished with difficulty in the midst of the sibilant or clicking bruits of emphysema, or else it assumes a larger and more humid character. It would be necessary, in a case of this kind, to be guided by the expectoration, the pain, the dyspnoea, and the febrile excitement.

IX. *Pneumonia and pulmonary Tubercles.*—The pneumonia which complicates pulmonary tubercles may be acute or chronic; we shall here speak only of the first. Acute pneumonia very frequently attends pulmonary tubercles, and it is rare to see a phthisical patient unattacked by it, perhaps even several times. The presence of tubercles in the pulmonary parenchyma, where they have more or less of the character of foreign bodies, the greater energy shown by the portions of the parenchyma not invaded by tubercles so as to establish supplementary respiration, the bronchitis which so frequently accompanies tubercles, and especially the difficulty which the patient experiences to withstand the changes of temperature, are circumstances sufficient to place beyond doubt the frequency of this complication. Acute pneumonia may supervene at all stages of tubercular phthisis.

1st. That which occurs during the first stage of this affection, almost always presents the ordinary characters: dulness, crepitation, bronchial respiration, rusty-coloured, viscous, and semi-transparent sputa; the diagnosis of this complication is, therefore, easy enough; but what we must remark is, that it exercises so fatal an influence over the softening, and perhaps also over the increase of tubercular deposition. Under the influence of this kind of inflammation, I have seen pulmonary phthisis suddenly assume a rapid course, become, as it is called, *galloping*, and in a short time hurry the patient to his tomb. This is not, however, the most frequent case; most usually, on the contrary, the pneumonia occurs a considerable number of times, without any such fatal influence over the progress of the tubercles.

2nd. The pneumonia which supervenes at the period when tubercularization is perfectly established, offers in its symptoms various forms: sometimes it is announced by the symptoms of ordinary pneumonia; it may then be easily diagnosed. At other times the diagnosis is not so easily established; numerous circumstances assist in obscuring the disease and giving it a latent character. Thus, pain is often wanting, or when it exists, it may easily be taken for those shooting pains with which tuber-

culous patients are often affected. The expectoration, far from becoming characteristic, is either suppressed or preserves its ordinary characters; the cough, instead of increasing, diminishes; the dyspnoea, it is true, augments in the greater number of cases, and becomes a very important symptom; but it attends as we know various other complications, and the same remark will apply to the increased frequency of the pulse, as well as the febrile excitement and general uneasiness. But all kind of doubt will disappear, if on percussion and auscultation we are enabled to recognise the usual phenomena of pneumonia; the reverse is, however, often the case: in fact, in some instances, the sonorousness of the chest remains the same as before; crepitation is masked by copious and gurgling râles; purulent effusions in the pleura, or false membranes of some thickness produce the same result, or else the lung is fixed against the wall of the chest by numerous adhesions, preventing the respiratory movements, and not allowing crepitation to develop itself: the same circumstances oppose the production of bronchial respiration, or when it exists, we might attribute it to the presence of tuberculous masses, &c. Still it is of the greatest importance to be able to diagnose this form of pneumonia, to combat it without delay, since it often hastens the death of the consumptive patient; it is only by attentively watching the symptoms that we can arrive at a knowledge of this complication; the painful points, an unquenched sensation of oppression, the general heat and uneasiness, the recent elevation of the pulse which becomes hard and wiry, the greater animation of the face, the depression of the strength, will direct the attention of the physician to the chest, and by auscultation repeated several times in the same day, he will be able to seize, as it were at random, the characteristic crepitation momentarily masked by the bronchial râles.

Pneumonia sometimes attends acute miliary phthisis; we then find after death occasionally over a considerable extent, the parenchyma intermediate to the granulations, more or less hepatized. In some cases of this kind, observed by M. Fournet, the local symptoms were very obscure; they did not distinctly present, either the character of the local signs proper to the first stage of this form of phthisis, or the characters of the local signs of pneumonia, but consisted principally of some of the râles of bronchitis; the sputa did not present the rusty-coloured tint observed in pneumonia, and the general appearance of the patient corresponded exactly with the preceding description. In a word, the symptoms of the pneumonia were completely veiled by those of the phthisis, which alone struck the attention of the observer.

3rd. The pneumonia which supervenes during the last days of phthisis is, according to M. Louis, indicated by no sign when the inflammation is very limited; but when it occupies a certain extent, the patients experience in the majority of cases three, four, or five days before death, pains on one side of the chest; at the same time the respiratory bruit is feeble, mixed with a fine crepitation, and percussion renders an obscure sound on the corresponding point. The sputa acquire a slight viscosity, but without having the same character as when the peripneumonia occurs in patients not weakened by anterior disease. Still, in some cases which he saw, these symptoms sufficed to indicate the nature of the lesion, to show that peripneumonia may be developed in phthisical patients wasted to the last degree, and that intercurrent diseases may, with a certain degree of attention, be discovered in complications combined with the greatest debility.

Before terminating this subject, I may remark that pneumonia will, in some cases, be of utility in the diagnosis of the first stage of tubercles. In fact, repeated attacks of pneumonia, affecting especially the summit of the lungs, having a doubtful progress, presenting general symptoms which are not in relation with the intensity and extent of the material lesion of the organ, occurring in individuals in whom we suspect tubercles by reason of the previous history of the patient; such attacks of pneumonia will, I say, throw some light over the otherwise difficult diagnosis of this first stage of tubercles which are yet but in a crude and disseminated state.

LECTURES ON CHEMISTRY. By JOHN SCOFFERN, M.D., Lecturer on Chemistry at the Aldersgate School of Medicine.

Two lectures have already been devoted to an investigation of changes effected on the cohesive form of bodies by the agency of heat. Did our time permit I might profitably direct your attention to further details; the subject is like the agents of which it treats, *expansive*, and were it for the purpose merely of claiming acquaintance with that giant child of Watt—the steam-engine, one is almost tempted to wander from chemistry into the regions of mechanics. To deliver lectures on the subjects of heat and steam without some allusion to that wonderful and elaborate machine, on which the superiority of our manufactures and navigation so much depend, would, perhaps, draw on the lecturer some remarks; but, on the other hand, those who know what an elaborate combination of mechanical resources have been necessary to render available the expansive powers of steam, will see the impropriety of entering upon these details in chemical lectures. The principles on which the steam-engine depends for its action are most simple.

Liquid, as you are aware, in becoming steam, expands; and thus with prodigious force (cold being applied to the elastic vapour thus produced) it contracts again, permitting atmospheric vapour to exercise its force in an opposite direction. Such were the principles alone regarded in the oldest description of steam-engine.

Below, a piston, fitted into a cylinder, was admitted a jet of steam, the elastic force of which pressed the piston up and communicated motion to an arm or lever; the cylinder was then cooled by surrounding it with water, a process which condensed the contained vapour, and allowed the external atmosphere to exert its usual pressure of 15 lbs. on the square inch, by which force the piston was forced down again.

From the knowledge you possess of the nature of elastic fluids in general, you will easily see how the ends desired can be more perfectly attained. It is evident that steam should be admitted above the piston as well as below it, in order to produce an equality between the ascending and descending motions. It is also evident that heat will be more economised by employing a separate vessel for the purpose of condensation, instead of cooling the cylinder itself. These are the two most obvious improvements on the old description of steam-engine; but numerous mechanical resources are brought into operation for the purpose of securing other advantages, and adapting the steam-engine to all the various purposes of manufacture and locomotion.

From the tendency which liquids possess of evaporating and producing elastic vapours, it is evident that the atmospheric, nor indeed other masses of gaseous matter, under common circumstances, can never be perfectly dry. The amount of moisture thus contracted is always proportionate to the temperature of the gas, and increases both its weight and volume. The table to which I now draw your attention, exhibits the maximum quantity in volume of aqueous vapour contained by gas of the specified temperature, at a barometric pressure of thirty inches:—

40 deg.	00933	61 deg.	01923
41	00973	62	01980
42	01013	63	02050
43	01053	64	02120
44	01093	65	02190
45	01133	66	02260
46	01173	67	02330
47	01213	68	02406
48	01253	69	02483
49	01293	70	02566
50	01333	71	02653
51	01380	72	02740
52	01426	73	02830
53	01480	74	02923
54	01533	75	03020
55	01586	76	03120
56	01640	77	03220
57	01693	78	03323
58	01753	79	03423
59	01810	80	03533
60	01866		

The uses of this table are obvious. At a glance it shows the amount by volume of vapour in any gaseous mixture between the temperatures of 40 degrees and 80 degrees, and gases are not likely to be weighed at any other.

The quantity by volume being known, its weight may be easily determined. For a cubic inch of permanent aqueous vapour, corrected to the temperature of 60 degrees, and a mean pressure of 30 inches, weight 0.1929 grains. In order to render the foregoing table available, it is necessary that the gas be saturated with as much vapour as it is capable of absorbing at its particular temperature. For instance, 100 cubic inches of gas at a temperature of 40 degrees, standing over water, would contain, as it appears by the table, 0.0933th part of its own volume of watery vapour; in this case the table is applicable; but if the same gas were heated, under such circumstances as would preclude the absorption of more water, then the table could no longer be rendered available.

When air is not entirely saturated with moisture, it is not quite so easy to ascertain the quantity present. One of the best means consists in cooling it to such an extent, that the quantity of moisture present is sufficient to saturate it, and consequently a deposition of the latter begins to be observed. This temperature being noticed, we can calculate the precise amount of moisture by the ordinary plan. The period of first deposition here spoken of is called the dew point, and may be exemplified in many simple methods. For instance, if I take a glass of warm water, and gradually cool it by artificial means, until its temperature is lower than that of the surrounding atmosphere, moisture will be deposited on its sides. Of course, in proportion as the amount of the atmospheric moisture is greater, so will the amount of cold be less—which is necessary for producing a condensation. Thus, by noticing this *dew point*, as it is called, when moisture first begins to be deposited, and observing the particular temperature at which it occurs, may we construct tables indicative of the quantity of moisture present in the atmosphere. Instruments for the purpose of indicating the quantity of atmospheric moisture are termed hygrometers; and Daniell's dew point hygrometer is founded on the principle just mentioned.

This instrument may be described as a cryophorus, which contains ether instead of water, and in one ball of which is fixed a very delicate thermometer. This latter bulb is made of blackened glass, (in order that the deposition of moisture may be seen more readily,) and the other is covered with muslin. When this instrument is employed, ether is dropped on the muslin of one bulb until moisture is seen to deposit on the other; at that precise instant, the temperature indicated by the thermometer inside is compared with the temperature of the atmosphere, as shown by another thermometer outside. It is evident that fixed relations exist between the degrees of the two thermometers, which relations may be used as data for indicating the actual amount of moisture in the atmosphere, or any other gas.

Other hygrometers depend on an entirely different principle—namely, on the property which certain organic substances possess of imbibing moisture; such instruments, however, should rather be denominated *hygroscopes*, inasmuch as they merely afford approximative indications, without any precise numerical results.

In the toy-shops are sold figures of monks with cowls—which latter, by means of some self-acting mechanism, is made to cover the head just before rain, when the atmosphere contains a great deal of moisture, and to fall back on the shoulders during dry weather. This toy is a hygrometer, or hygroscope, the mechanism of which is very simply contrived. In connexion with the wood is a piece of catgut, which, varying in length and tension according to the dampness of the air, produces a somewhat curious mechanical result. The twisted beards of grasses, mounted on a circular plate, are also used for a similar purpose, but chiefly to ascertain the amount of dampness in beds.

Under the head of atmospheric air, where I shall have to scrutinize still more fully the effects of heat in influencing the bulk and moisture of gase-

us bodies, this subject will be alluded to again. cannot, however, lose so convenient an opportunity of recommending the process of *drying* gases, and thus operating on them without the presence of moisture, rather than trust to an appreciation of the latter by any calculation whatsoever.

The usual plan of conducting this operation is as follows:—Fused chloride of calcium (a substance which powerfully abstracts water, whether in the state of vapour or otherwise,) is broken small, and put into a tube about half an inch in diameter, and two or three feet long; through this apparatus the gas is slowly driven, when the chloride of calcium effects its desiccation. Certain gases, however, are absorbed by chloride of calcium, in which case fused carbonate of potash, or fused potash may be used instead. In other instances a surface of oil of vitriol desiccates still more effectually.

We cannot afford to devote more time to the examination of changes of cohesive state produced by heat; we must now proceed to investigate its various methods of distribution, and the laws which regulate them.

The most casual observance of natural phenomena must have convinced you that heat always tends towards an equilibrium; a warm body placed in a cold atmosphere soon assumes the temperature of that atmosphere, and *vice versa*. The result then is universal; but it will be found on examination that the laws accomplishing this result are various. Need scarcely tell you that our remarks are now only intended to apply to evident heat, or temperature; for of the laws which regulate the distribution of latent heat, or caloric, we positively know nothing.

It will be found, on investigation, that temperature may be propagated or dispersed in three different ways, which have been respectively designated by the terms conduction, convection, and radiation. It is the nature of the cohesive state assumed by a substance, that determines which mode shall be exercised, so that knowing whether a body be solid, liquid, or gaseous, we can predict which of the three means of distribution will enjoy predominance, except, perhaps, in a few instances where a peculiarity of molecular constitution might confuse us.

There seems to be a natural tendency for one particle of matter to transmit its temperature to the next, in regular succession, until an equilibrium is accomplished; this is simply what is meant by conduction, and is the only means by which heat can be transmitted through opaque solids; and so as a mere statement of the phenomenon is concerned, our notice of it here might end, but we are obliged to go a little into detail.

The conducting powers of bodies is exceedingly various, although presenting no invariable connection with other qualities. Metals, as a general rule, conduct best, and among these there is a great difference, as the accompanying table will show. It was deduced by Despretz from certain principles investigated by Fourier. Gold is assumed as the standard of calculation, and the other metals are arranged accordingly:—

Gold	1000	Tin	304
Silver	973	Lead	180
Copper	898	Marble	23.6
Platinum	381	Porcelain	12.2
Iron	374	Fire Clay	11.4
Zinc	363		

No property of bodies with respect to heat is better known, or more fully applied to useful purposes, than their difference of conductive powers. Bodies of different materials, although heated to the same extent, may give rise to opposite sensations. If a piece of metal and piece of wood be both cooled to 32 deg., the metal will feel intensely cold, the wood only moderately so. If, however, both the metal and the wood respectively be heated to 180 deg., then the hand will experience a painful sensation of heat from the former, while the latter will only feel moderately warm. These seeming anomalies admit of an exceedingly easy explanation, dependent on the fact that metals are very good conductors of heat, and wood a very bad one. Metal at 32 deg. will rapidly abstract heat from the body, but a stick at the same temperature will not. A metal at 180 deg. will rapidly give heat to the body—a stick at the same temperature will

not; hence we solve the mystery, and learn that after all the terms heat and cold are merely conventional and ill defined.

When liquids or gases are heated, the case is different; for although their temperature be rapidly equalized, yet it is chiefly accomplished by another means, termed convection, from *conveho*, to carry.

This mode of equalizing temperature, far from being incompatible with conduction, is often perhaps always co-existent with it, only rendered inappreciable by the former's predominance. It naturally follows from an effect of temperature on liquid and gaseous matter, an effect which is almost universal, it is true, but which cannot exercise on solids a sufficient agency to determine that kind of transmission of heat termed convection. The effect which I allude to is *expansion*, and a consideration of which will immediately afford a rationale of the process of convection.

If a source of heat be applied to the lowest layer of a liquid or a gas, states in which cohesion is partially or entirely overcome, the first effect of heat is to produce *expansion*, and consequently a diminution of specific gravity. Under these circumstances, the portion of liquid, or gas thus heated, will rise through those portions which still remain cold, until an equalization of temperature is effected; this is termed *convection*. It is scarcely easy to believe that a conduction is not in exercise at the same time, but the great preponderance of convection prevents our noticing it. It is to the process of convection, then, that heat is chiefly transmitted through fluids and gases.

The next and last mode of propagating heat—radiation—is the most curious of all; its consideration must be deferred until the next lecture.

ERRATA IN LAST LECTURE.—Page 130, col. 2, line 10, for analysis read analogy; page 131, col. 2, line 50, for erroneous read enormous; col. 3, line 50, for respiration read evaporation.

PATHOLOGY.

THE EMPIRICAL SCHOOL OF PATHOLOGY.—Theoretical dogmas respecting the nature of health and disease were exactly the sort of dreams to captivate the minds of philosophers during the speculative ages of antiquity; but for all clinical purposes in the actual practice of medicine they were found utterly futile, and in no way calculated to afford any sure guide in the administration of medicine. Hence there were a set of empirical practitioners, who, as the term implies, rejected all pathological explanations *in priori*, and confined themselves entirely to whatever knowledge chance and experience had brought to light; they discarded, in fact, all hypothetical inquiries in physiology and general pathology, and directed their studies exclusively to senectities and empirical therapeutics. It may be said, indeed, that this was the primeval mode adopted in the practice of medicine, for there must have been thousands of diseases and thousands of cures before any one ever thought of examining upon scientific principles the mysterious laws which regulate the various conditions of organized beings. Empiricism is, therefore, in reality the parent source of medicine, and to this source is undoubtedly owing whatever information has been acquired, even till the present day, respecting the virtue and operation of medicinal agents. No one, by mere inspection of chemical analysis, could have discovered the peculiar potency of sulphur as an antispasmodic, that of mercury as an antisyphilitic, that of quinine as an antiperiodic in miasmatic fevers, &c. The whole multitude of remedies more especially called *specifics* are the pure offspring of empiricism; and since all remedies must be administered with a specific intention, or otherwise be no remedies at all, we may conclude that whatever is truly valuable in the different pharmacopœias of the whole civilized world was originally derived from blind empiricism—and that in most instances, the empiricism of savages or ignorant peasants who had never been enlightened by the smallest ray of science and philosophy. But, though the discovery of all pharmaceutical agents may justly be attributed to empiricism, we cannot, however, trace to the same fountain any great por-

tion of our knowledge in rational pathology and therapeutics. I have placed the Empirical School in the general category of pathological science; but its place in pathology must be considered rather in a negative than a positive point of view; it should be regarded, not in the light of any particular doctrine which it has propounded, but rather under the negative aspect, of its having utterly eschewed all doctrinal theories as in all cases futile and erroneous when brought into clinical practice. In reality, therefore, the Empirical School does not properly belong to pathology, and is observable only by its standing forth at a wide distance from all other medical schools, in throwing aside all the shackles of dogmatical science, applying itself solely to the study of the most prominent symptoms of the disease, and administering such remedies as experience has shown to be useful under similar nosological appearances. The professors of this school asserted that all inquiry into the exciting cause of the disease or its seat in the organism was a work of supererogation; it was enough for them to know that the disease existed, and that it presented certain known phenomena; the final object was to remove these morbid phenomena without caring about their nature or origin; and this they effected by means of therapeutic agents, which experience had previously shown to be of service under similar circumstances. It must be confessed that the ultimate design of medicine should be the cure of diseases, and if in all cases diseases appeared under a definite form, and could be symptomatically recognised by evident lines of demarcation, so that every malady could be at once met by its corresponding antidote, then of course, in a practical point of view, there would be nothing further to be desired. But, unfortunately, diseases even of the same type present very different phenomena, and the symptoms of different diseases often merge into and overshadow one another; so that the mere empirical physician must necessarily find himself embarrassed at the occurrence of every new variety, and must run the risk of adopting an improper treatment from not being able to establish a correct diagnosis. The empirical practitioners, with a view to extricate themselves from the dilemma, endeavoured at length to improve upon blind experience, by reflecting upon it a certain degree of light derived from inductive reasoning; experience was divided into three elements—*accident*, *experiment*, and *analogy*. By *accident* was meant the kind of therapeutic knowledge gained by chance, as was the custom in the primeval days of the science. By *experiment* was meant the knowledge that was acquired by expressly making trials or experiments with certain remedies upon persons in disease. By *analogy* was meant the kind of indication that was furnished by instituting comparisons between pathological symptoms. Every one will perceive that the practice of *experimenting* upon patients is that which has been followed by quacks in all ages and countries. The homœopathic school of the present day is eminently empirical, and depends entirely upon *experiments*; but its experiments are distinguished from those of the ancient school, inasmuch as they are always practised upon persons in *health*, and not upon those in *disease*. Serapion introduced a great reform into the analogical element of experience under the name of the *metabasis*, or the passage from similar symptoms with similar remedies, directed by the previous history of the disease and idiosyncrasy of the individual; thence *experience*, *history*, and *metabasis* were called the tripod of empiricism. Menodatus of Nicomedia extended Serapion's metabasis by instituting an inquiry into the *exciting causes* of corresponding maladies, and thus by his ætiological researches he made considerable advances towards the *rational* schools of medicine. I should observe that Hippocrates was essentially an empirical practitioner. It was the custom in ancient days to expose the sick by the highways and in public places, so that the passers-by might communicate whatever they thought would be beneficial for their cure. When by this means any valuable specific was discovered, it was inscribed upon tablets and affixed on the walls of the temples and other public places, so that all might have recourse to it, when afflicted by the malady against which it was an antidote. The father of

medicine spent a large portion of his life in travelling about various countries and collecting those popular remedies and such observations as he found written on the public tablets. Having thus collected a vast body of information, he reduced the whole into a systematic form, and added perhaps a few discoveries made by himself during his extensive practice. This is the real service which Hippocrates conferred upon the science of medicine. As a dogmatic pathologist he can be considered in no other light than as one who made a very bad use of a very noble genius. Although in these early times empirical medicine had arrived at a very considerable degree of perfection, it was nevertheless forced to yield to the prevailing spirit of dogmatism. The Greeks, who were the only depositaries of true science, were constantly absorbed in some metaphysical subtlety; and when we descend down to the darker ages of Christianity, we find the temple of science occupied by a set of superstitious monks, some of whom attempted to unravel the syllogisms of Aristotle, and others endeavoured to explain the principles of Galen; but few, or none of them perhaps, except the illustrious Roger Bacon, had an idea that all truth, both in philosophy and medicine, must be deduced from actual experiment and observation. The Empirical School having thus fallen into obscurity during many centuries, was at length revived in England by Thomas Sydenham, the Hippocrates of our country. A similar revival was brought about in Italy by the Italian Hippocrates, George Baglivi, who (though in theory he belonged to the Mechanical School of Pathology) was a truly rational empiric in his practice of medicine. The celebrated Hildebrand pursued a similar course of analytical empiricism and observation in Germany. By the genius and laborious efforts of these illustrious men, and others who followed the same line of investigation, medicine was again restored to its true path from which it had been led astray by the visionary hypothesis of philosophers. All the natural sciences had wandered in a similar manner from the way of truth until they were at length brought back by Bacon and Galileo. Empirical analysis is the only method in medicine which has not been borrowed from, or rather which has not been directly founded upon, some philosophical dogma, and we may safely assert that as medicine in its infancy groped in the footsteps of blind empiricism, so in the days of its perfection it will walk in the full brightness of empirical analysis, conducted by Anatomy, Physiology, Pathology, and Therapeutics.

CAMBRENSIS.

ON STATISTICAL MIDWIFERY.

By CHARLES CLAY, Member of the Royal College of Physicians, London, &c. &c., Lecturer on Medical Jurisprudence, &c., Manchester.

[For the 'Medical Times.']*

THERE is no branch of medical study so capable of improvement, by statistical inquiry, as the obstetric department, particularly in reference to the many circumstances of great importance immediately preceding and subsequent to parturition, both in respect to the parent and child, not only in the mere circumstances attendant on delivery, but the diseases and casualties connected with both. To bring all these to bear in statistical records, and form just and valuable conclusions therefrom, would be most difficult in private practice; but in hospital midwifery there is scarcely any department of medical science which might be so easily accomplished; and yet, great as the facilities may have been, of all the departments of medical inquiry those of the principles and practice of midwifery are the least indebted to statistical information for general conclusions, many of which, as laid down by obstetric writers, being very erroneous. The necessity of more minute records relating to facts, has for many years struck me very forcibly; and when I have had an opportunity, I have invariably recorded as many circumstances as I conveniently could in an extensive private practice, without annoyance to my patients; still I have found the points of information I could collect too limited for general investi-

gation, compelling me to omit many circumstances of importance (an omission only to be overcome by the opportunities available in hospital practice, where every desired information can be easily obtained without danger of annoyance.)

Whatever works we examine of lego-medical writers, we find them abounding in inconclusive statements on matters of importance, where it might be fancied (after many centuries of experience, and cases of almost unlimited number,) the most certain and positive conclusions would have been arrived at. I may observe, by way of illustration, a few of the most prominent, viz., the exact period of utero-gestation—pelvic capacity—weight of the fœtus—length of fœtus—length and peculiarities of the funis—earliest and latest period of conception—proofs of child-breathing—maturity and immaturity of fœtus—puberty, and many other circumstances of equal importance, which it is impossible, for a moment, to reflect on without perceiving the great value attached to statistical information, particularly in lego-medical investigations, touching the questions of infanticide, pregnancy, age of consent, rape, delivery, impregnation, &c. &c. Nor are these advantages confined to medical jurists; physiological inferences of great value would be derived from the same source, and facts connected with theoretical and practical midwifery, together with the diseases of women and children, would be very considerably advanced, in proof of which the medical reader would have but to read over the items of the following Tables proposed, to see not only their importance, but also their extensive application to many departments in medical science.

I do not know that any Lying-in Charity adopts a sufficiently effective and minute register of the facts, &c., which transpire; but I do hope the time is not far distant when such, or a similar one to that here proposed will be kept in all; then, and not till then, shall we be enabled to establish many points beyond contradiction, and weed out many errors that time, prejudice, and the want of sufficient data have entailed on many of our most important subjects of medical literature. For myself, I can speak that no common circumstance should deter me (had I the opportunity of extensive hospital practice) from adopting a mode of rigid statistical inquiry into such particulars as I think are highly necessary, and desirable to be adopted. I am well aware some points of considerable importance, after all, would not be accomplished by hospital registers, such as tests of virginity; and as infanticide could never occur, only under insanity, in such institutions, many facts would be wanting; but this would be counterbalanced by the accounting for (on good grounds) many cases of supposed infanticide, and some of our lego-medical errors avoided. I do not imagine the register here proposed to be immaculate. I believe many useful hints might be furnished by the profession towards its completion, which may have been omitted from oversight; and I am of opinion that the students of all midwifery classes would be well, and very profitably employed in assisting their teachers to carry out such principles,—a circumstance which would materially benefit their progress in after-life, conferring a boon to the medical public, and the world in general, by assisting their obstetrical, physiological, and lego-medical investigations, at the same time lending a considerable help towards correcting the errors hitherto entertained, as well as the laws of the land bearing on the questions connected with such investigations. The register I feel anxious to propose should consist of the following items, arranged under separate heads, according to the opinion of the person superintending. My plan is as follows:—

SECTION I.

Embracing Facts antecedent to Parturition.

1. Name.
2. Age of Female.
3. Age of Father.
4. What year Menstruation first commenced.
5. Temperament, Stature, and General Appearance of Female.
6. Do. Do. Do. of Father.
7. No. of Pregnancy.

8. Any Abortions previously—and how many.
9. Any Premature Labours previously—and how many.
10. Last appearance of Menses.
11. What Diseases subject to.
12. Menstruation, or not, during Pregnancy.
13. Floodings or not Do. Do.

SECTION II.

Embracing Facts observed during Delivery.

1. What hour Labour commenced.
2. What hour Labour terminated.
3. No. of hours in Labour.
4. What month of Utero-Gestation.
5. Character of Pains.
6. Time between Rupture of Membranes and Delivery.
7. Time between Delivery and Extraction of Placenta.
8. Presentation of Child, &c.
9. Ergot used, or not.
10. Opium used, or not.
11. Probable Quantity of Waters.
12. In what position delivered.
13. If Instruments used, what, and whose.
14. Pelvic Capacity.
15. Accidents and Peculiarities.
16. By whom attended.
17. General Remarks.

SECTION III.

Embracing Facts subsequent to Parturition.

1. Placenta retained, or not.
2. If Retained—how long.
3. From what Cause, Engorgement, Simple Adhesion or Disease.
4. Weight of Placenta and Membranes.
5. Means used for Extraction.
6. Floodings, or not.
7. After-pains, or not.
8. Inflammations—what?
9. Fevers—what?
10. Perinæum Lacerated or not, and the cause.
11. Lochia suppressed, or not.
12. When Lochia ceases.
13. When Milk first appeared.
14. Remarks.

SECTION IV.

Facts to be observed connected with the Child.

1. Sex.
2. Alive, or Dead.
3. Length of Child.
4. Weight of Do.
5. Congenital Diseases—what?
6. Malformations—what?
7. Length, Thickness, and Peculiarities of Face.
8. Circumference of Head.
9. Do. of the Hips.
10. Asphyxia, or not.
11. How restored.
12. If Immature, what state of Membrana Prolapsa—Hair—Nails—Colour.
13. Likeness to Parent—what?
14. General Remarks, &c.

SECTION V.

In case of Death of Mother, in Sectio-Cæsareis, observe—

1. Pelvic Capacity compared to the same whilst living.
2. State of Corpora Lutea.
3. State of Uterus.
4. State of Fallopian Tubes.
5. Cause of Death.
6. Remarks.

SECTION VI.

In case of Child being born Dead, in Sectio-Cæsareis, observe—

1. General Appearances.
2. Specific Gravity, and State of Lungs.
3. Do. Do. of Liver.
4. State of the Parts of the Circulation peculiar to the Fœtus.
5. State of the Diaphragm.
6. State of the Bladder.
7. If Died during Parturition, when the state of Putrefaction commenced.
8. Size of the Liver.

SECTION VII.

Facts observed in the Sectio-Cadaveris of Children having Died after Birth.

1. Age.
2. State of the Lungs, Specific Gravity, &c.
3. State of the Liver, and Size.
4. State of Foetal Circulation.
5. Cause of Death.
6. General Remarks.

Such is the general plan I would propose; and it is impossible to deny the utility of such an arrangement; the information derivable from it would be immense; the errors it would correct *not a few*, and those of vital importance, not only to medical men, but to the public in general. I should be glad to see such principles adopted, with any improvements deemed necessary, by those possessing opportunities for putting it in practice; thus setting an example worthy of being followed with real advantage.

DR. ELLIOTSON ON MESMERISM.

To the Editor of the 'Medical Times.'

SIR,—As you have the honesty and good sense to devote your pages to the two grandest departments of physiology, Phrenology and Mesmerism, both which are rapidly overwhelming the opposition of ignorance, prejudice, and unprincipledness, it is my intention to send you communications on both subjects.

You lately reported what you observed in the case of a young lady mesmerised by me at my own house, and cured of violent hereditary fits of eight years' duration. I soon afterwards received the following note from a gentleman not in the profession, to whom this case was the first sight of mesmerism:—

"Sir,—I had not seen a case of mesmerism before I had the honour of being at that at your house yesterday; I was so struck with its importance and truth, that I mesmerized one of my daughters on my return home; I was about twenty minutes in accomplishing it. She is 10 years old, of a lymphatic nervous temperament, and in perfect health. I let her lie for a few minutes after she went off; I then sed her, shook her and shouted in her ear, but she was quite insensible to all; I then placed her in a chair, and drew each hand from her mouth across her cheek, and she sent forth a most pleasing smile; I then drew each hand down her upper and lower lip, she immediately opened her mouth; I then asked her where she was; she said, I am in the parlour; instead of that she was in another room. When asked her who I was, and she said I was her brother John; I then desired her to repeat some poetry, which she did very correctly; I then asked her to sing, which she did as well as when awake. After being in this state about half an hour, I drew my hand upward over the face a few times, and she immediately awoke as though from a sound sleep, and had no recollection of what she had done in that state.

"I thought you would feel pleased at this, therefore I have sent it, and I have no doubt the time is not far distant when Mesmerism will be applied to all diseases where the nerves are affected, and that you will then be hailed as one of the greatest benefactors of your species.—I am, Sir, yours, obedient and obliged,

"JOHN TAYLER."

4, Francis Place, New North Road, April 28, 1842."

P.S.—I should feel obliged if you would inform me if you have published any work on mesmerism, and if I am going into the country and shall do all I can to promote so important a truth."

This is the proper course to examine into the truth of mesmerism,—to go yourself to nature, to make experiments yourself, as any one may; for the process is simple, and healthy persons are, I believe, more susceptible than those who labour under disease. So in phrenology, the proper course is to learn the great divisions and the chief individual organs, and then to examine for yourself whether the heads and mental characters of those respecting whom you cannot doubt, are in accordance. Words and arguments on either

phrenology or mesmerism leave you just where you began. "Believe for the word's sake."

I now offer you an extract from the *Dublin Evening Mail* of the 25th of May last:—

"ANIMAL MAGNETISM."

"We have a high respect for the faculty, and the Dublin doctors are, we imagine, quite as good as any other similar class in any other city. But we would not give one jack-straw for the opinion they profess upon the subject of what is called—we suppose, for the want of a better term—*animal magnetism*. Upon this subject there was never a more perfect union amongst them than since, in the seventeenth century, they one and all decided against Harvey's theory of the circulation of the blood. But, indeed, this has been their 'wont' at all times. Anything new or extraordinary—anything which they could not at once assimilate to their doctrines, or explain by their theories—has been denounced as heretical, damnable, and idolatrous. * * * With regard to animal magnetism, they are all, with a very few exceptions, stout and uncompromising sceptics—nay, not sceptics merely, but *denouncers*. And there is not one of them, from the unfledged apprentice just introduced into the mysteries of the dissecting-room, to the knight or the baronet that rolls in his chariot, who will not furnish you with reasons and arguments, as long as to-day and to-morrow, on the gross delusions of Mesmerism. In point of fact, it is considered not only unprofessional, but almost fatal to a man's prospects in his profession, to admit, for a moment, that he has the slightest doubt as to the utter impossibility of what he sees before his eyes. Or, if you press a learned friend to explain the mode by which the delusion is practised, he forthwith enters into a learned disquisition upon the nervous system, upon hysteria, catalepsy, and most of the ills which flesh is heir to—a disquisition which will leave you, at the conclusion, as wise as when he began. We have had the honour—we believe that is the word—of conversing with some of the highest men—or, at least, the most fashionable practitioners in Dublin—on the subject, after the publication of some extraordinary experiments in London, and, really, all we heard on the matter was some gibberish about hysteria and catalepsy. We did not then, nor do we now, in the least, doubt the correctness of the theory or the mode of treatment. There is no person we would sooner call in, in cases of this kind, than the Surgeon-General, for instance—but we must say, that his arguments made little impression upon us, as to the facts of the London cases. Granted, and it must be conceded, we imagine, that the patient is nervous, liable to hysteria, epileptic—and that it is alone upon such patients the magnetiser can produce an effect. Granting this, however, we demanded not the apparent mode (that was obvious,) but the secret and subtle influence by which such effect is produced. To this we never received, even from the most eminent men in Dublin, a satisfactory or sufficient answer. They, indeed, were never so bull-headed or silly as to deny facts. When pressed upon these points, they gave evasive, or what they called in lieu of a better phrase, scientific answers. But we did not look for science; we think the phenomena, as already developed, beyond the reach of an inductive process, which can be applied to its explication. All that we required to know was this—Did you believe what you saw, or did you not? If you did not believe it, will you be good enough to point out the mode in which the delusion was practised? Will you tell us why you think it was a cheat? And if a cheat—why has it not been exposed long ago?"

"We must say that to these questions, put to some eminent men in Dublin, we never received a satisfactory answer. But we are answered loudly enough by the whole herd of the secondaries, and of the third and the fourth in place. With one accord they declare that it is all a d—humbug—all folly—all nonsense. And we dare say the majority of the *physiculi* think it so; but, as we have already said, we would not give a twopenny ticket for a whole theatre of such opinions. In the first place it is fashionable—it is just a parcel of the doctor's profession to deride pretensions of the kind. There is no probability that any man who professes himself a believer, will make any progress

in his calling. He is sure to be designated as a dreamer and an enthusiast, and, as your stupid fellows never dream, and scarcely can comprehend what enthusiasm means, they join in full cry with the bell-wethers. They raise a shout—they repeat a sarcasm—they propagate a sneer—and a practitioner who may have the honesty, the fatuity, or the folly to avow his belief in Mesmerism, as they call it, is at once run down, and soon hooted from his pursuits. This has occurred more than once in England—once in the case of a very eminent practitioner—and to him the result has been so disastrous, that we may be perfectly assured, no man of consideration in his art, will, hereafter, venture even to argue on the question. It is much easier to scoff.

"*Sit mihi fas—visa loqui*. We do not pretend to be mental or physical philosophers. We take upon trust all that the learned are pleased to tell us of these things. Still less do we know anything of medicine, except what we pick up in conversation, and from dipping, now and then, into a few popular books. But we know enough of the craft and mystery of the profession to be quite aware of this, that, if we were physicians, after making such an avowal as we have done, we should run a very fair chance of being ruined in our professional prospects. We doubt whether Marsh or Crampton would professionally survive such a declaration. The small fry would be so happy to take advantage of the *slips* of the great men, that all the medical journals of the empire would be crowded with paragraphs on the blotting out of such bright lights. There would not be wanting Wakley's in plenty to laugh them down, and to turn them into a scurril jest."

Now, these remarks are just what the profession were sure ultimately to experience; and, when the whole world turns round upon them thus, (and the truth of Mesmerism is now on the eve of general admission,) they will declare that they always saw and allowed there was some truth in it, and at last will speak of it as if they had never declared it was all a delusion and imposture which they at once saw through, and as if they had not joined in full cry to hunt down the man who, clad in the panoply of truth and independence, stood in this country for a time almost alone.

Lamentable as was the conduct of some of my pupils, who are indebted to me for what they know of the practice of medicine, and for every kindness and attention in my power, one has acted an honest part in America, and the following letter will show with what success:—

"Boston, March 25, 1842."

"MY DEAR DOCTOR,—Yours of the 21st December was only received on the 26th ultimo; it gave me much pleasure, as it exhibits your staunch adherence to the cause of truth.

"The tornado of opposition is over—the infidels are vanquished, and Mesmerism is now past ridicule; in fact, scientific subjects in this particular resemble political ones, discomfiture or success seems to be the standard of *truth* and *error*. Wherever I go, which is by invitation, (generally a committee of gentlemen send me an invitation,) immense crowds meet me, and I feel much surprised at the attention and candid disposition manifested among all classes here; depend on it this is the most favourable of all countries to promulgate a new subject; the mind is not so clogged as it is in old countries, though I have to contend with the antiquated prejudices of physicians, who are the most unjust and illiberal in all subjects concerning which they should be most anxious to investigate. Another great obstacle is the pretensions of our *weak* friends, who have claimed so much for the subject *unconditionally*, causing many superior minds to consider the whole subject in the most unfavourable light. I answered in full the absurd and nonsensical achievements of Mr. Braid, of Manchester, which you shall receive, together with the account of the most extraordinary case of somnambulism on record, and attested by the most credible living witnesses. Dr. Woodward is the principal physician and superintendent of the Insane Hospital at Worcester; a report of the said hospital I have inclosed to you, with other papers, all of which will be interesting to you—in fact, everything of the kind you shall receive from me.

I have re-published Mr. Townshend's work here; nearly two thousand copies have been sold. Should you require any, I can send over a few hundred copies. The execution and paper surpasses the English edition. It sells here for one dollar. The duty would not be more than a few pence per copy. Please give my kindest regards to Mr. Townshend; tell him his work has brought over some of the "hardest cases." You are as well known in this country as in Europe. I have published your accounts in the papers, your resignation at University College, &c., &c. Mr. Otis Clapp has not received anything as yet from you.—I remain, yours faithfully,

"ROBERT COLLYER."

"To John Elliotson, M.D."

"Dr. Caldwell has come out boldly in the form of a pamphlet in favour of Mesmerism; he refers to you frequently."

I propose to send you next week an interesting account of a case of Mesmerism, by a lady of Cheltenham, Phrenologist and Mesmerist, whom I never saw, but who is an example of her intelligence, independence, and integrity to our sex—something more than "a screaming, parturient, interjectional, hysterical animal," as the wag of divinity terms women in the *Morning Chronicle* of to-day.—I have the honour to remain, &c., &c.

JOHN ELLIOTSON.

Conduit Street, June 9.

THE EDINBURGH UNIVERSITY.

(To the Editor of the 'Medical Times'.)

SIR,—The contest for the chair of Surgery in the University of Edinburgh, at present vacant by the lamented death of one who was in every sense well fitted and qualified to perform the onerous, yet honourable duties attached thereto—Sir Charles Bell—comes on immediately; and, as it is creating no inconsiderable stir amongst the *medici* here, and being connected with a vastly important branch of medical education, I would beg to trouble you with a few observations connected with what is required in any individual who aspires to this high office, begging you and your numerous readers, however, to observe, that reference is made to none of the candidates who are at present in the field. And, first of all, I would set out with the remark, that one seeking for the possession of this chair must have an accurate and minute knowledge of anatomy, for it is upon this basis that all his future success must depend, both as a practitioner and as a teacher of surgery; but although a good surgeon must of necessity be an anatomist in the most comprehensive sense of the term, care must be taken not to reverse the case, otherwise a most deplorable error will be committed, for no one can for a moment suppose that a mere accurate and minute anatomist will make a practical surgeon. Moreover, he must not only have also a perfect knowledge of the diseases incident to the human frame, experience from a most extensive and long-continued practice must follow as another *sine qua non*, before he can even boast of the title of surgeon. This knowledge gained from books, or from the lecture-room, or from the experience of others, will not suffice—it must be obtained from the direct personal communication and converse (if you will allow the expression) with the *bonâ fide* diseases themselves. Books and plates can convey to the mind a very good idea—but only an idea—of disease, but they cannot form a certain and ever-to-be-depended-upon guide in practice; it is only from the store of past experience that you can hope to draw a knowledge of any disease in question, so as to form a diagnosis beneficial to your patient and creditable to yourself. Knowledge without experience, in reference to this subject, as well as a great many others, is like the vessel carried rudderless into a shoreless sea, and driven hither and thither by the power of every contending wave; and although such a man might be backed by innumerable recommendations of the most laudatory character—although he might be possessed of all the eloquence of a Cicero—he ought to be rejected, as utterly incapable of filling the chair of surgery. Eloquence is good enough in its way, but when it comes unaccompanied with other and more essential necessities, it raises itself into an evil of no

ordinary kind, for it must often lead the mind of the hearer away from the subject more immediately in consideration into an admiration of the speaker, not as a master of his subject, but as a mere elucutionist, who, under a voluble tongue and flowery language, finds a ready shelter for his ignorance. It is a matter of deep regret, also, that of late too much influence and canvassing have been used with these appointments to the irremediable injury of our college; but it is to be hoped that those with whom the duty rests of filling up the chairs which are now and then becoming vacant, will look more to the future welfare of Alma Mater than the serving of their friends. It is to the filling up of these chairs with a well-judged discrimination, untinctured with any selfish motives, that we are to look forward to our University regaining her former celebrity. Surely such a small sacrifice will not be considered too much, when they consider that the weal of the millions depends on the purity of education in our colleges; and also when they look abroad on the country, and see Quackery raising its Gorgon head with such unblushing effrontery, killing and destroying with its unholy pollutions every object with which it comes in contact. Apologising for the length of this communication, the importance of which demanded it, I am, Sir, your very obedient servant,

THETA.

Edinburgh, June, 1842.

EXTRACTS FROM FOREIGN JOURNALS.

(For the Medical Times.)

AMERICAN.

Defect of Consolidation in Fractures: its Causes and Treatment. By Mr. Norris.

Non-consolidated fractures may present themselves under four different conditions. In the first, the osseous extremities are united and surrounded by a cartilaginous mass, constituting, to speak truly, a stage of normal consolidation, and which only becomes a pathological condition when the cartilaginous state persists beyond a due time. In the second case, the broken portions are devoid of all means of union; their extremities are thinned and moveable. The limb can then fulfil none of its functions. In the third, the medullary canal at the extremity of the broken portions is obliterated and covered over by a tissue similar to periosteum; the parts of the bone are maintained in contact by ligamentous bands, variable in number, thickness, and direction. Lastly, in the fourth order, are ranged those cases where the ends of the bone are enclosed in a capsule, containing a fluid similar to synovia. The two corresponding surfaces of the bone are then polished, rounded, and sometimes covered, here and there, with a thin layer of cartilage. The limb still remains of some use. Mr. Norris also places among the causes of non-consolidation, the state of pregnancy. The following observation presents great interest:—

A woman had her fore-arm fractured obliquely towards the third month of pregnancy. Dr. Baird, finding that, after sixty-five days' continued treatment, the limb still remained flexible, although the broken ends had been maintained all this time in perfect contact, applied a simple supporting apparatus, and advised the patient to wait till after her accouchement. In fact, this process having taken place, the consolidation was perfected in a month.

The too hasty use of the fractured limb also frequently prevents consolidation, and destroys that which has already commenced. The following case is a remarkable instance of this kind:—

Absorption of the entire Humerus after Fracture.—M. Brown, 18 years of age, fractured his right arm at the middle portion. A suitable treatment was adopted; but before consolidation was entirely perfected, he had a fall, which fractured the limb again at the same

part. Reunion would not take place, and, to the great surprise of the physician, the osseous extremities commenced to diminish in size, and to become shortened. This process of absorption continued till the humerus had entirely disappeared, without any opening taking place in the skin. Now (being 36 years of age) the patient continues with one arm much longer than the other. He is able, with the right hand, to raise a load, and then the muscles elongate themselves so as to give the diseased limb its natural dimensions; but when the hand is removed from the object, the arm instantaneously shortens itself nearly six inches.

The means of remedying this defect of consolidation are next considered. The following are the results of the most important of them, drawn up in a statistical form:—

Compression and Repose.—Of 36 cases treated in this manner, 29 were cured. These successful cases were divided, according to their seat, in the following manner:—

Of 13 fractures of the femur . . .	9	cured
7	"	leg . . . 7 "
12	"	humerus . 9 "
4	"	fore-arm . 4 "

These fractures had existed for a space of time varying between 22 months and 4 weeks; the mean term being 5 months, 12 days. The mean duration of the treatment was 9 weeks. There were but four times any accidents induced, such as excoriations, intense pains or inflammation. No one case was followed by death.

Seton.—In 46 cases where the seton was used, 36 were successful—namely,

Of 13 fractures of the femur . . .	9	cured
10	"	leg . . . 10 "
16	"	humerus 10 "
6	"	fore-arm 6 "
1	"	jaw . . . 1 "

In 21 of these 46 cases an incision was made before passing the seton; 17 were cured, 2 improved, 1 case was unsuccessful, and 1 died. In 24 other cases, where this previous incision was omitted, 18 were cured, 1 improved, 4 unsuccessful, and 1 died. In the 46th case, the seton was passed through a previously-existing fistula. The fractures had existed, at a mean term, for 12 months and 12 days, and the seton was left applied from 7 days to 13 months; the mean duration was 7 weeks and 3 days. In 17 cases, other methods of treatment had been unsuccessfully employed before the application of the seton. The accidents had been arterio-hæmorrhage (twice), fever, erysipelas, or abundant suppuration 10 times.

Resection.—Of 38 cases where this method had been employed, 24 had been cured, 1 improved, 7 unsuccessful, and 6 had died. The seat of the lesion was as follows:—

12 fractures of the femur . . .	7	cured
6	"	leg . . . 5 "
12	"	humerus . 6 "
7	"	fore-arm . 5 "

The fractures had existed, at a mean term, 1 month and 19 days. The cure was 4 months taking place. In 17 cases other processes had failed, and the seton in particular had been tried uselessly 6 times. The accidents induced had been erysipelas (6 times), copious suppuration (twice), and *phlegmasia dolens* (once). The following are the author's conclusions on each of these processes:—In making choice of the means of treatment, he would have regard to the seat of the lesion, to its proximity to an articulation, to the limb affected, to the length of time the fracture had existed, to the degree of mobility existing between the fragments, to their situation in relation to one another, to their mode of connexion, &c. The treatment

by repose and compression is suitable in those cases where the fracture, though regularly treated, does not become united in the usual space of time. If the non-union depend on a want of action, or a defect of vitality in the part, compression and repose would be inefficient. It would at the same time be necessary to apply blisters, the moxa, tincture of iodine, or some other stimulant to the seat of the lesion. In unsuccessful cases, we should then try friction of the ends of the bone one against the other. If these means remain unproductive of benefit, or where the fracture is of long standing, we should apply the seton. But it would be contra-indicated, if the fragments were very far apart, if a mass of cartilaginous substance existed between them, or if the fracture were near an important joint, a large nerve, or vessel. It is not till afterwards that one should resolve to lay bare the broken portions, so as to cauterize or scale them; and resection would be the last resource. Amputation should be practised only when the limb is a source of inconvenience, and the patient demands to be freed from it. Our author lastly terminates with the following considerations: 1st, That the defect of consolidation is most common in fractures of the thigh and the arm. 2d, That the mortality, after operations necessitated by this cause, follows the same laws as in common amputations, being proportioned to the size of the limb and the proximity to the trunk. 3rd, That failure from these operations is most frequent in fractures of the humerus. 4th, That the seton, with all the proceedings proposed for its application, is more free from danger, more quick and more certain in its results, than cauterization and resection. 5th, That incision of the soft parts, made before passing the seton, augments the dangers of this proceeding. 6th, That by leaving the seton a long time in the parts, we increase the chances of ulterior accidents, without any greater guarantee of success.

On Scurvy, as declared among the Troops of the United States on board the Colombia sloop-of-war. By Dr. Coale.—After some preliminary remarks as to the rarity of this disease at the present day compared to former times, which is doubtless owing to the improved system of diet, as well as the general arrangements now adopted on board ship, Dr. C. proceeds to detail the symptoms of this malady as declared with remarkable intensity on board the above frigate on a voyage to the East. The crew, consisting of 480 men, the élite of whom had been withdrawn to arm two sloops-of-war, were fatigued by previous voyages, and were altogether in an unfavourable condition. The greatest precautions had, however, been taken to ensure the health of the men; a large store of fresh provisions, water, and conserve of acid fruits, had been laid in; but, unfortunately, the whole of these preserves were spoiled on arriving in a hot climate, and there was then no possibility of replacing them. On the coast of Sumatra, the crew were attacked with dysentery, which increased considerably on reaching China. Still, of 150 men affected, but 12 died. The treatment consisted, at first, in the employment of mercurial preparations, but as these did not succeed well, opiates and astringents were eventually adopted. In the month of August, fourteen months after their departure from the United States, and during which period the frigate had been almost constantly within the tropics, some of the crew began to complain of *nyctalopia*, which became so frequent that it was necessary to make the affected men continue working. They were then seized with vomitings, nausea, disgust for food, a painful sensation of sinking at the pit of the stomach, and lastly with evident symp-

oms of scurvy. On the least bruise, large violet spots, or even oedematous tumours, appeared upon the limbs and trunk; the face was covered with petechiæ; the extremities became infiltrated, in some being unattended with pain, but in others accompanied by violent lancinating pains, which were not always limited to the parts upon which the ecchymosis appeared; at the same time the breath became fetid, the gums began to swell and were of a livid colour, bleeding on the least pressure. When these had projected as high as the teeth, they began to peel off by layers, without any formation of pus, and left the teeth uncovered, or surrounded by a mixture formed of the remains of their substance and of a yellowish matter. The teeth shook on the least touch, but were painful only on eating some hard substance, and eventually they recovered in all their original firmness. The desire for fresh food gave place to loathing for all kind of diet; as the disease progressed, the body swelled; the face became puffed up; the strength entirely failed; the slightest scratch changed rapidly to a wound, whence a fetid sanies, colourless or grey, and sometimes tinged with blood, escaped. Diarrhœa then supervened, and the patients were carried off by intestinal hæmorrhage. In others, drowsiness or continued sleep occurred, from which it was impossible to rouse the patient. They made no complaint, but appeared indifferent to every thing around them, taking the food given them, but neither asking nor manifesting any desire for it. This state of somnolence continued a long time, and was less rapidly fatal than the other modes of termination. Death was preceded by a comatose state, accompanied by stertorous breathing, starting and spasm of the limb, dilatation of the pupils, and other symptoms of cerebral compression. In a third class of patients, death was caused by constitutional irritation alone; nature was exhausted by the vomitings, abundant sweats, violent pains, and sanious discharge from the wounds. The number of patients was already beyond 120, and as long as the vessel was at sea, the proportion was diminished only by deaths; not one case was cured. The number of deaths from scurvy alone was 23; 11 died of this disease, but with other lesions which probably accelerated death. The most numerous as well as the most severe cases, both of dysentery and of scurvy, were among the oldest sailors, or those who had most abused spirituous liquors; whilst among the younger men, it only attacked those who were already weakened by some anterior disease. No amelioration was obtained while at sea; but on reaching port the effect of fresh regimen was remarkable. In all, excepting 9, the improvement was considerable immediately after the arrival, and as soon as fresh food was given in sufficient quantity. Milk, especially, seemed to be most eagerly desired. The daily allowance for each patient was, three pints of milk, four eggs, half a chicken, a pound of new bread, and potatoes *ad libitum*. In the course of three weeks the number of patients was reduced from 118 to 62, and this number was in a short time still further diminished.

POLYTECHNIC INSTITUTION.—Dr. Payerne on Wednesday last, descended in the diving-bell at this useful establishment, and remained three hours without any supply of external air, excepting that which the bell contained in the first instance. He declared that he might just as safely remain 24 hours or a still longer time. What the chemical means which he uses to reproduce the exhausted vital principle of the air are he does not divulge, but they appear to be simple and very perfect, and promise to be of no little service in submarine operations.

POOR-LAW MEDICAL REMUNERATION.

THE medical gentlemen residing within the circuit of the Brentford Union, having received the annexed offer of salaries, forwarded the following resolution to the Board of Guardians:—

“We, the undersigned medical practitioners, having duly considered the recent regulations of the Poor-Law Commissioners, are of opinion that the rate of payment proposed by the Board of Guardians for the different districts in this Union, is inadequate to ensure proper attention, and the best medicines.” (Signed)—

Acton.—William Chubb, Henry Day, John Salt.

Old and New Brentford.—F. A. B. Bonney, John Farrell, H. J. Radcliffe, Henry Richards.

Chiswick and Turnham Green.—W. W. Cox, F. C. Dodsworth, C. C. Eyre, W. Lambton, H. J. Leigh, R. W. Loadman.

Ealing.—Henry Wilkins.

Hanwell.—Thomas Haffenden, J. T. C. Nicoll.

Hounslow.—G. J. S. Camden, Joseph Chapman, C. B. Emmott, R. A. Frogley, John Henley, William Wheadon.

Isleworth.—W. M. Case, H. G. Day, J. MacKinley.

Twickenham.—John S. Algar, C. C. Clark, J. Simoëns.

The following is the amount proposed by—

	Population.	Salary.
Acton	2665	£20
Chiswick	5811	55
Old Brentford to Gun-	4972	40
nersbury Lane ..		
Ealing	3435	30
New Brentford—	3434	25
Brentford End to		
Lyon Lane	2103	30
Hanwell, Greenford,		
and Perrivale....	3329	32
Isleworth, exclusive		
of Brentford End &	5405	50
Chapelry district at		
Hounslow	5209	45
Heston, and the Isle-		
worth Chapelry	36,363	327
district		
Twickenham	359	60
Union Workhouse,		
averaging		

APOTHECARIES' HALL.—A lamentable accident occurred here on Saturday last, at about 10 in the morning, causing the death of Mr. Hennell, principal chemical operator to the Company. The evidence of Mr. Charles Rivers, assistant of the deceased, given at the inquest, will best explain the circumstances:—“I had been with him (the deceased) in the early part of the morning, but had left him between 8 and 9 for the purpose of going to breakfast. When he came down, about half-past 7 in the morning, he examined the preparation of fulminating mercury upon which he had been engaged the previous evening, and which had been left during the night under cover in the yard. At 9 o'clock he weighed a small portion that had been subjected to a heat of 115 degrees in a steam drying-stove, in order to ascertain the quantity of moisture it contained. When Mr. Hennell went to breakfast he left it in a pan on a block in the yard. It was understood between the deceased and myself, that when the composition was sufficiently dry two grains should be tested by striking it with a hammer. The bulk was afterwards to be weighed. Deceased was not so long as usual at his breakfast, but returned to watch the progress of the pre-

paration. Before I returned to the premises I heard a loud report, and hastened to the spot, suspecting the cause. I there saw deceased lying in the yard in the mutilated state in which the jury have seen the body. No part of the composition could be found after the explosion. It is impossible to state positively how the explosion took place. Mr. Hennell told me he had received a communication from the Directors of the East India Company, requesting that 6lb. of the detonating powder might be ready for shipment on Saturday last. He tried to obtain the quantity from the ordinary manufacturers, but being only able to obtain 3lb. by the time required, he determined upon manufacturing the remainder himself. He accordingly proceeded to prepare the necessary quantity, which having done, he resolved upon mixing it with the 3lb. that had been purchased, in order to produce uniformity of colour. To this admixture I attribute the explosion. From the known skill and experience of Mr. Hennell, I cannot conceive that the accident originated from carelessness. The composition would not explode in a moist state, but a slight pressure when dry would produce combustion. It was never prepared on the premises before. It required the greatest care in the process."

ROYAL COLLEGE OF SURGEONS, LONDON.

List of gentlemen admitted members, on Friday, June 3d, 1842:—

S. C. Mason, T. Vallance, T. Ballantine, C. W. Currie, F. Goolden, H. Bell, J. E. Smyth, G. Harday, A. K. Mayburg, S. Moriarty, J. W. Mason.

Admitted Monday, June 6th, 1842:—

W. Hill, C. W. Tilly, G. Saunders, S. J. P. Parker, R. N. Willis, T. S. Parke, N. F. Davey, C. T. Staples, T. Ingham, M. B. Lefebure, J. Yate, R. Haines.

TO CORRESPONDENTS.

We have to apologise to several correspondents for delaying answers to their letters. We shall discharge our debts speedily.

Mr. W. H., Manchester, X. Y., Charitas, A. Lecturer, &c., received.

S., Bristol.—*On such matters we have not the whole arrangement, and it must be recollected that Rome was not built in a day. Our friend will, by-and-by, find that there is a nearer agreement in our opinion than he surmises. He has our best thanks.*

M. B.—*We are assured that the Commissioners have recommended to Sir James Graham that Poor-Law Appointments should be opened to properly qualified men with diplomas from any acknowledged British source. They made the limitation so properly objected to because they erroneously thought that the law enjoined it.*

A Student of Bartholomew's must have surely drawn his inspiration from that un-Castalian source, a jug of half-and-half. We have read somewhere that love is the incentive to poetry in young minds: our correspondent's appears to be hate. With these novelties in the way of inspiration we are prepared for something

— "which had lain unsung before"

in the way of performance, and perhaps the first few lines which we here give, will show that we are not disappointed.

"Come, doctor, thus with Twining hack,
Who always sticks close to your back,
And walks with you to Hope, and Mark,
And although M.D., is still a clerk,
But stop, dear doctor, it is FUNNEY."

Indeed we will stop. Funny! so funny, that we

"Will have no more at any money!"

A line of our own we may assure our readers.

Professor Owen's third lecture on the Anatomy and Physiology of the Nervous System will appear in our next.

We have received several money enclosures of late, and though we are bound to state that each came safely to hand, we yet prefer where it is equally convenient, a post-office order.

THE MEDICAL TIMES.

SATURDAY, JUNE 11, 1842.

"Judex damnatur, cum nocens absolvitur."

THE annual meeting of the Irish Medical Society, in whatever light considered, is an important demonstration. Made up of gentlemen from all parts of the country, with various creeds, and political opinions, it yet exhibits a harmony and concentrated energy of action which we cannot think of but with the most unmixed delight. The atrocious measure of Messrs. Nicholls and Phel-an (designed, truly, in a most felon-like spirit) may have had its influence in producing this enthusiastic union among Irish medical men; but we are not without hopes that the effect will long survive the cause. The machine once in motion may go on long after the arm that gave the impetus has ceased; and we own that we cannot but think that the spirit of zeal and unanimity running through the whole proceedings, while offering the useful assurance, that disunion and distance form no essential condition of professional life—foreshadows an active course of moral interference in medical government, on the part of our Irish brethren, which opens to us long and noble vistas of professional amelioration.

But while eulogizing thus warmly the estimable qualities characterizing the men—their zeal, their energy, their union,—we deeply regret that we must speak in very different terms of the wisdom—the prudence which appear to us to have marked some of their proceedings. We can have no wish to speak offensively of individuals, who, unknown to us, can excite no feelings of a personal character; but we cannot conceal that, after reading the Report, an impression is strong in our minds that the private—we had almost said the improvisated—opinions of the President, Mr. Carmichael, have misled the Association into one or two steps which it will soon see ample occasion to deplore. To those who have read our account of the meeting, and know our sentiments, we need hardly say, that we consider one of these to be the unfortunate resolution, committing the members to an approval of Sir James Graham's unfinished Bill.

What are Mr. Carmichael's own expressions in reference to this Bill? If we may believe his own words, Mr. Carmichael wants to see—

"A good preliminary education, such as is required of those who enter into the other learned professions. A good practical professional education, to be tested by a scrutinizing demonstrative examination. Equality of qua-

lification in each great division of the United Kingdom. The union of physic and surgery, at least in education. The separation of the practice of pharmacy from the practice of medicine, as far as the interests and usages of society may permit."

These, according to him, are the primary essential objects of the union of medical reformers, and we presume that Mr. Carmichael, Irishman as he is, has yet no notion that his association, like a French army, has a right to a triumph, when beaten out of all its positions; or that the exuberance of its gratitude should be in the inverse ratio of his obligations. Will he, therefore, permit us to ask him, not whether all his primary and essential objects have got a place in the new Bill, but whether any one of them has had that honour? What are his own words? "*Not one of those objects (the utility of which is unquestionable) is adverted to in the new Bill!*" This is strong; and offers an odd commentary on his thanks to Sir James. But Mr. Carmichael, like a thorough-going West-Briton, is not content to be thus contradictory—he must be emphatically so, and accordingly we have him adding—"Not one of the objects which medical reformers have in view is (as already noticed) stipulated in this Bill." Nay, he goes further, and adds the remarkable words, "*quite the reverse!*" Yet we have an express resolution, conveying the members' thanks to Sir James, and approval to the "general principles of his Bill!" To knock men down "for love" is no new distinction for Irishmen, but to feel love for being knocked down seems to us a rather novel improvement by our Western neighbours in the Christian code of charity. "*Quite the reverse,*" indeed. Need we direct attention to that infamous clause, which tacitly enacts impunity for the mischievous body of Quacks? This is almost the only principle of the new Bill about which the framers are in perfect, settled, composed harmony. Sir Benjamin Brodie, and Sir James Graham, and Mr. Guthrie, here are in unhesitating consent; yet, perhaps, there is no portion of the Bill, defective as it is, which more powerfully calls for observation, and change. The repression of Quackery is a petty point, considered in its relation to medical remuneration; for, in the gross, it must increase the calls for the medical man's visits; but, in its relation to human life and happiness, it is a question yielding in importance to none that come before the Legislature. It is an essential part in the jurisprudence of a country which looks upon the prevention of crime as the great means for its diminution, and may be fairly looked upon as a just measure of the progress of enlightenment in a people's social government. For our own part, we repeat our strong assurance, that no measure of medical reform will satisfy us which continues to leave life at the mercy of venal empirics.

Mr. Carmichael agrees with us in the

anxiety "to protect the public from the malpractices of self-interest, ignorance, and rashness," but has a peculiar mode of exemplifying his anxiety. He would "wisely decline any interference with them." Sir James and he, for once, are here in perfect agreement. Here he does not thank the Baronet for *nothing*.

Will our friends, the members of Unions generally, permit us one word of caution at the present juncture? The higher ranks of the present excluded surgeons and physicians will not, it is well known, be unfavourably treated by the new Bill, and in that goodly proportion will thaw, probably, their horror at the degradation caused by venal and corrupt corporations and colleges (Mr. C. will remember the words), "in crowding our ranks with hordes of low, ignorant men;" and their affright "at the anarchy and disorganization into which the profession has fallen." We wish not to make any charge of want of principle against Mr. Carmichael, or others holding similar positions in medical associations; but all know how even our best convictions are affected and swayed by the complexions of our interests; and it might be difficult to say how far, for example, Mr. Carmichael might not be induced to believe the profession "*regenerated*" (his own word), if he found himself, by Sir James's aid, in one of its high places.

This caution may appear premature; but, if noticed, may prevent much disunion among men at present with one mind, and save some useless regrets. Let every medical reformer keep, *or be kept*, to his colours!

PENCILINGS OF LIVING MEDICAL MEN.

WESTMINSTER HOSPITAL—MR. GUTHRIE.

IN our last Sketch we contended that high and important situations in hospitals should be awarded as *munera propter merita*. That the candidate should undergo a competition examination, and give evidence of superior ability. That the longest purse and smallest brain should not carry off the prize, as at present. We affect to loathe and repudiate bribery in members of Parliament. In our appointments to these institutions, such practices are still more censurable, as they are at the expense of the lives of her Majesty's liege subjects, and greatly to the injury of the interests of science.

It is an axiom indisputable, that medical charities should have two primary objects in view. The first is, that relief or the administration of aid to the suffering poor should be prompt and perfect; the second, that those to whom the trust is committed, should lay open the wards to the instruction of a class of men whose high and holy office is, to administer to the medical wants of the community.

These were the expressed as well as implied intentions of the founders and benefactors. Upon these conditions the property was bequeathed. The two duties in a well-arranged, properly organized hospital, are inseparable and indispensable.

The hospital surgeons, we must confess, are a mercenary body of men. Like the money-changers in the Temple, they make the wards markets for exacting toll and tribute, and seem more intent on gain, than on the higher and nobler duty of imparting instruction, or making their pupils useful members of the profession. If they do become

good surgeons, they may thank their own industry, that conquers all obstacles, rather than the assistance rendered them by those they so liberally feed.

On commencing the course, the hospital surgeons affect urbanity and great attention. Clinical lectures are promised; but as soon as the gudgeons are caught; that they are hooked or booked for their certificates, all the promises are forgotten; and the student, from the fear of his not getting his certificates, relinquishes his rights, or rather dares not assert them, and allows himself to be defrauded of that which he has fairly purchased. The clinical instruction is of infinitely more value than the dull and prosy lectures of one half of the metropolitan surgeons. They are ill-digested, ill-arranged, miserable compilations—which the merest tyro, with a very ordinary library, might elaborate. If any portion of the treatment seems obscure, and the student requires explanation or elucidation, the professor stares with astonishment at his assurance. Like the Oracles of Delphos, he is to be interpreted, not questioned. Another great fault is, that hospital functionaries pretend to be so engaged by the aristocracy and the public, that they have no time to pursue post-mortem examinations. Surely the medical attendant who watches over the malady to the patient's dissolution is the proper person to ascertain if the symptoms could be traced to a change of structure. If the fatal event have falsified his prognosis, he alone can explain the facts upon which he founded his diagnosis, and expound the principles upon which his therapeutic agents were employed. This it is that constitutes the science of medicine; it is thus the theory and practice of medicine are connected and established. It thus becomes inductive philosophy; all other modes is rank empiricism. In the dead body, the book of Nature, you read the cause—you see the effect, and experience suggests the remedy.

Westminster Hospital is situated the north-west side of the square of the Abbey. The façade is a neat and light imitation of the architecture of its heavier gothic neighbour; the entrance and vestibule elegant, airy, and commodious; the wards lofty, and well adapted to their purposes, with one exception, viz., having the privies in one of the corners of each ward. It is not only a nuisance, but it exhibits ignorance of the first principles of miasmatic influence and hygiene, that we would not expect to find in the construction of the humblest mews in London. Evacuations from the human body being decomposing animal and vegetable matter, predispose to disease. In disease they become more virulent and dangerous, and every precautionary means should be adopted to have them at once removed from the precincts of the hospital.

It is supported by voluntary contributions. It contains about 250 beds; subtract one hundred, and you are nearer the number. The mismanagement and abuses of this hospital are proverbial. The surgeons and physicians are elected by interest, intrigue, bribery, and chicanery. A few pounds enable the friends of the candidates to become governors. The scenes that take place are disgraceful; the meetings bear-gardens—pandemonia. Every greengrocer becomes a subscriber. There is a large pauper population around, in want of every kind of relief; he finds it his interest to be able to oblige his customers with tickets for advice and medicine, and, if necessary, admission. The medical attendants are bound down in such ignominious vassalage, that they dare not remonstrate. It is not an uncommon thing for eight or nine members of the subscriber's family to receive gratuitous advice during the year. Any person may be house-surgeon on payment of one hundred guineas—Money not merit obtains this post of responsibility.

GUTHRIE is the great gun here: '*ite profani*,' we should have said George James Guthrie, Esq., F.R.S., twice president of the Royal College of Surgeons, &c. &c. &c. This gentleman has made the Peninsular campaign, and feels that he has materially assisted his friend the Duke of Wellington in beating Napoleon's greatest marshals. We are gravely told that the Duke is said to have expressed, in the most marked manner, his sense

of Mr. Guthrie's services, which Mr. G. most implicitly believes; and feels that he is in gratitude bound to reciprocate the civility, by eternally chaunting the glories of his commander. He has all Gurwood's despatches by heart, from the beginning to the end of the series; all the trite sayings, the brilliant characteristic *bon mots* of the still more illustrious Napoleon, he, in his extravagant admiration, puts into the mouth of the Duke. He is not satisfied with tearing away his laurels, he must rob him of the paternity of his intellectual productions. One instance, in illustration:—The other day, in the library, we heard him giving directions to have the great skeleton of the Mylodon, with the scaffolding, removed entire into the museum. The man declared it impossible. "Impossible!" says the indignant Guthrie. "It is a word, (as the Duke said) not to be found in our dictionary, when he gave orders to place twenty pieces of cannon on such a mountain." The smile on the man's face told that even he detected the literary larceny, and relished not its injustice or misappropriation. This peculiarity of his is well known. Dr. Lynch, at one of the meetings of the British Medical Association, alludes to this weakness, and as it may give an insight into the course which he is *supposed* to pursue in medical politics, we shall quote him:—

"Hesiod notices the cry of the crane, as indicative of the departure of winter. The ignominious and inefficient concessions of the corporators reveal what their selfishness and fears would fain conceal: signals of distress, signs of capitulation, are hoisted from the fortress of corruption. Until recently, they rested their defence upon their presumed perfections. They tried to convert their vices into virtues. They now stand self-convicted, self-condemned by their own reports. One goose alone of the name of Guthrie (who, they say, loves pelf more than principle) waddles about the citadel, and gabbles out 'No surrender,' and fancying himself a duodecimo edition of the great hero of Waterloo, declares that no reform is needed, that the corporations are mirrors of administrative excellence, and that the oligarchy of which he is the head is the least rapacious of its species. Advance to the attainment of your rights, cry justice, reason, and experience; Halt! stand at ease cries Corporal Guthrie—it would be democratic, it would be dangerous to our power."

He is generally considered the most sturdy opponent of the rights of his professional brethren. Every corporation, except the self-elected, irresponsible few, forming the Councils of the Colleges, have recognised self-government in the members as a fixed, inalienable, and constitutional principle.

We must now endeavour to convey to those who have not had the pleasure of seeing this *alter-ego* of the Duke, some idea of his personal appearance. He is a stout man, of about 56 years of age, about 5 feet 8 inches high, and about 13 stone avoirdupois. His head is round, small, but well shaped, surmounting a neck of singular strength and breadth, and rising out of a chest of unusual massiveness and dilation. His body, which he carries erect, like the fogleman of a regiment, rests upon a well-built pair of Doric pillars. He looks you straight in the face, boldly and saucily. His forehead is not large, but compact, and furrowed with lines rather of observation than of care or age. His eyes are small, dark, piercing, with a peculiar expression of slyness and sagacity, with a look of a love of drollery, or a laughing devil in them, that would pop out more frequently if it would not detract from his professional dignity. His general demeanour is brusque—rude. Certain great military men have been noticed to have this air. He can be a perfect gentleman, when he thinks proper. His countenance highly intelligent. His hair, white, silvery, full, stands bolt upright, like quills upon the fretted porcupine. This gives a venerable appearance, which his face and frame contradict. He marches through the wards with a long suite of students. He is kind, if not polite; always ready to communicate information. He is not wanting in powers of perspicuous exposition. He seems to hate the parade of literary exhibitions. He enters into familiar disquisition on the probable termination of the case. He is a sincere friend to the at-

tentive pupil. His conduct on several occasions proves that, notwithstanding his hot temper, he possesses a warm, generous heart, and that he will go a great way to serve a person deserving of being befriended. His works on gunshot wounds, the result of practical observations, cannot be too highly valued, and are standard works. He is justly celebrated as an oculist. He rescued this important and interesting branch of surgery out of the hands of empirics. He laid down more scientific modes of treatment, and having founded the ophthalmic institution, his fame as an oculist, or a dextrous operator for cataract, became extended. He is a very good lecturer, with an excellent memory, and considerable facility in expressing his ideas. His style is simple and unaffected. He uses the proper words in the proper places, and interweaves, without any effort, several amusing anecdotes and military reminiscences into his discourse, which make them eminently attractive to the young and hot-blooded youth around, and more especially as they are enlivened by many touches of dry and quaint humour.

At the head of the executive of the College, we regret to hear that he is a little tyrannical; that he orders about the surly Dr. Willis as if he were an orderly of the lowest grade. We feel, however, less sympathy with him than for the mild, unassuming, gentlemanly, and well-informed assistant, Mr. Stone, jun. This intelligent young man is an universal favourite. A little courtesy more than common walks into men's hearts without knocking at their doors. Stone seems to start like an affrighted deer at the distant sound of the lion's voice. Guthrie certainly "comes it very strong." Is this another touch of the sternness and discipline of the iron Duke? We should prefer to see him imitating his policy when at the head of the administration, rather than his personal bearing. Let us draw a parallel. The Duke was (*we think*) a bigot (politically), and an intolerant. He opposed the admission of his Roman Catholic fellow-subjects into the privileges of freedom, expatiated on its danger, and closed the portals of the constitution against them. They united, became organized, and the alternative was war or concession. Expediency, civil war, its disastrous consequences, urged the Duke. He turned round, and abruptly carried a great and comprehensive measure, that gave tranquillity, strength, and contentment to the empire. You, Mr. Guthrie, have long made your colleagues believe that you would as soon rake up the bones of your forefathers, as expose the divine relics of municipal antiquity to the crumbling and ruinous finger of innovation. You have long enough affected to be as indignant at the touch of reform upon corrupt institutions, as Lord Byron was at the plunder of the Elgin Marbles. You have been, and are the champion of the finality system. Things as they are, *with Guthrie as Premier*, are your glory; things as they ought to be, and as they soon will be, your abomination. Even Whittington was *only three times* Lord Mayor of London. You must be soon dethroned, as a natural revolution of the spheres. Now, we know you to be a cunning old soldier; you care not a curse—to use a vulgarism—for the corporations, only as a means of your own advancement. They have been the ladder of your exaltation—you have reached the last round; you cannot go higher—you must come lower. Look around you with the eye of a good general, sweep well the horizon, interpret the signs of coming events, reflect upon your next grand strategic move. Your politics—so at least *we think*—are all moonshine—like the nymph Echo, nothing but voice. Your former doctrines will break, under the impulse of your interest and strong mind, like the bonds of the Philistines before the might of Samson. You see her profession in arms—agitated, determined on the work of disenfranchisement. Justice gives power and confidence to their exertions. Even the mild men who tranquilly pursue the mute honours of physic—who shun public meetings from innate modest reserve of disposition—are waxing wrathful at the obstinacy of the monopolists. Even those who quietly went on their mission of utility, are joining unions, and demanding the representative system. Imitate your great prototype. mutiny abroad, and insurrection against antiquated, is

obsolete, and usurped authority. Disarray the forces, by equality, and instead of slaves make them contented members; take the ground from under the feet of the agitators by wise and timely concession—break the wand of those political Prosperos, and give unity and tranquillity by liberal laws, and make yourself the apostle of an enlightened profession's regeneration. The benefits that you would derive, from exchanging the service of a clique for that of the entire body of the members of the College, we will point out in our next, with further commentary on your character and writings.

PROBE.

CASE OF EXTERNAL SORENESS OVER THE ORGANS OF TIME AND TUNE AFTER EXCESSIVE EXCITEMENT, &c.

By H. BROOKES, Esq., Birmingham.

OF MESMERIC EXCITEMENT OF INDIVIDUAL ORGANS DURING SLEEP, WAKING, &c.

SARAH BADGER, in her infancy, was afflicted with epilepsy, but from her first to her 14th year she was free, when some sudden and intense fright brought them on again. From 14 to 17 she was seldom many days without a fit, and at the latter age these attacks, aided by mental and physical sufferings brought on decided insanity. For twelve months she was confined in a lunatic asylum, and during the latter part of the time, at least, was treated very kindly; and being a lively, prattling, singing girl, was permitted occasionally (though a pauper patient) to enjoy herself with the music and dancing in the ladies' convalescent gallery.

A few months after her release she came to my house as domestic servant, but as mental anxiety still possessed her, her fits returned with greater frequency, and in a few months she again became decidedly insane. The parish officers insisted upon her being sent to the parish workhouse, on account of the expense of keeping her in an asylum; but as I conceived the latter the more proper place, I retained her in my own house, until I could compel them to send her there. This occupied about a fortnight, during which the following observations were made:—

Her fits were rather frequent, and in the intervals between them she was sometimes terribly *violent and malicious*; at others, *most mild, happy, and cheerful*; the *former* was invariably the case, if she imagined herself at the *workhouse* (where she had been previously ill-used); and the *latter*, if she imagined herself at the *asylum*, where she had been cheered by music, and kindly treated. She could see but indistinctly; the pupil of the eye was preternaturally dilated, and almost insensible to light; the persons about her were alternately the objects of her hatred or her affection, according to the prevailing mood. In the workhouse mood, I was taken for the Rev. Mr. A., and at the asylum for Dr. K. the physician, or Mr. G. the superintendent.

Finding her so happy and manageable in the latter mood, I endeavoured to give a direction to her delusion, on the waking up after each fit, by applying a musical box to her ear, which expedient I was delighted to find almost invariably succeeded in fixing her mind at the asylum. Thus the intervals between her fits were almost wholly occupied by singing and dancing, and conversations on music.

After several days of this excessive excitement of her musical faculties, which, though necessary, or at least excusable under the circumstances, was, nevertheless, injurious, she had an unusually violent attack of hysteria, followed by epilepsy; on recovering from the fit she sat still, viewing her own hands as they lay on her lap, slightly moving her fingers, and starting at each movement as if frightened. At length she said (still looking at her hands),

"Good God, Bessy, look at 'em—what the devil are they—did you ever see such great ugly things—what are they?" Miss B. told her they were her own hands, and to convince her laid hold of her fingers, when she started at the sight and screamed in the utmost alarm, and as the hand was raised towards her face, she shrunk from it as from something that might overwhelm her, and sunk back in the chair. The next instant she screamed, "O, Bessy, hold me—save me—I'm falling—O, it's coming upon me—(sinking)—it's crushing me—there—there—now it's blazing—fire—fire—fire, (pause). O, how beautiful it looks—O, what beautiful creatures!" (She now seemed quite gratified, and was calmly gazing upwards.) "How pretty—crimson, purple, scarlet—all colours—and so rich and splendid—look, look, Bessy—see what a lot of 'em—all flying, and jumping, and running about—what are they all, angels or devils—there they go—see, see them—up and down—over and under—O, Bessy, I'd never sell such pretty things—now the fire again—fire—fire—fire—(pause)—it's all over now—O, it's falling upon me—let me go, I shall be crushed—O, save me, save,—don't leave me to be burned alive—(fainting, and the body sinking,)—O, it's too late—it's crushing me—Oh, oh!" She now gradually sunk, moaning into another fit.

The apparent *successive* derangement attracted the notice of a phrenologist, and I became anxious to observe if the phenomena would occur again.

On recovering from this fit she exhibited just the same phenomena, and in precisely the same order, as before. Her ejaculations were almost verbatim the same as each organ became affected, until the secondary affection of *Weight*, when she saw a large horrible figure—"It must be a flying horse all in flames—flying about the ceiling," &c. At length she ejaculated, "O heavens, it's falling upon me—hold me—save me—it goes round—now it's coming again—it tramples—it crushes me," &c.; and she gradually sunk, as if overpowered and dying from the pressure, into another fit.

On recovering from this fit she appeared much better, and soon began to enjoy herself as usual.

The next day, my friend, Mr. S., and myself, were observing her, and I pointed to the swelling and inflammation which were then evident over the organs of *Time* and *Tune*. In doing so my finger touched the skin over *Time*, and she shrunk from the touch as if it had given the most intense pain; I then touched *Tune* on the same, and produced the same effect. I repeated the experiment over and over again, sometimes moving my finger over and with slight pressure upon other parts of the forehead until it touched upon one of those organs, and when it arrived there, but not till then, it produced the effect. She was laughing, singing, and talking merrily at the time, and did not appear to see, or feel, or observe my motions till those spots were touched; the only evidence she then gave of a sensation were the shrinking and a short, piercing scream; she did not otherwise notice it, and appeared totally unconscious whence the sensation proceeded.

After singing several songs with greater glee than usual for my friend (whom she imagined was a gentleman who had formerly often listened to her) she became exhausted, and had a fit. On recovering she exhibited the same successive derangement of the organs of *Form*, *Size*, *Weight*, &c., as on the day before, with little variation. This naturally led me to discuss the phenomena phrenologically with my friend, and whilst so doing, I wished to indicate with my finger-end the locality of the several organs, as their successive derangement became mani-

fest, without, I must confess, the most remote expectation of seeing the same effect produced, which I had so recently seen in regard to *Time* and *Tune*; but so it was. At that moment she was speaking of fine and beautiful colours. I put my finger on the organ of colour, intending to explain that the organ then affected was situated there, and was startled by her short, piercing shriek, as she shrunk from the touch. Though I then suspected, I did not feel assured of the fact, and begging my friend's attention, tried it again several times, producing each time the same result; I then tried the other organs in that region, but though *Size*, *Form*, and *Weight*, had just before been deranged, no sensation was produced. *Time* and *Tune* were also tried, but she did not now flinch.

By-and-by *Weight* again became affected, and I found both that and *Colour* sensible to the touch, the others remaining insensible.

I had several other opportunities of making these experiments on these organs, and always found that *as each of them became affected, it became sensible to the touch, though not so immediately as before; that as each succeeding organ became affected, the sensibility of the last preceding generally disappeared, though sometimes, when once the organ had become affected, it continued sensible.*

These observations were made in April 1837. I named them to Mr. Hughes, a medical friend, at the time, but he thought (with me) they were too extraordinary and isolated for general credence, and I therefore only carefully noted them. I would merely add, that the exciting cause, whatever it might be, appeared to move from the internal towards the external angle of the eye-brow, and then to come back again, invariably producing another fit when it arrived at the organ of *Weight*.

She remained in the asylum for about a year, and soon after her second release came into my service again, and has had her fits, more or less, ever since.

In November last I began to mesmerise her, and she soon became lucid. On the 16th of December, she directed me to mesmerise her on the 20th, and permit her to sleep for 24 hours, during the last of which she said she should be able to tell us the cause of her fits, if they were curable, and what remedies should be applied. She was laid to sleep accordingly, and about the tenth hour there appeared symptoms of considerable determination of blood to the head, and she began to hear and speak of the most exquisite music, and asked who was playing, and where, &c.? By and by she began to sing to it, at first feebly, but after the first minute or two, with her usual power.

The physical exertion, I had no doubt, would be injurious, as she was in a very exhausted state; and I therefore endeavoured to restrain it. With this view, I breathed strongly on the organs of *Time* and *Tune*, and she gradually ceased singing, saying, "They play it very badly—I can hardly hear them now—humph, they've stopped now." In a minute or two after I had ceased breathing upon her, she said, "Hush! now they're playing—"

'Gaily the Troubadour,'

and immediately began to sing it—starting about the middle of the tune—not at the commencement. I then pointed my fingers to her mouth, rendered her tongue cataleptic, and sealed her lips up; but she still continued the efforts to sing, producing the usual humming sounds through the nostrils for a short time, and then ceased. On releasing her mouth, I inquired, "Is the music playing now?" "Yes," she replied, "very prettily." "Then, why did you stop singing?" "I could not help it—I

could not sing." "Why?" "Because you forbid it."

She still heard the music several times after this, and joined it with her voice; but as often as she did so I renewed my operations on *Time* and *Tune*, and stopped it. At length the frequent stoppings annoyed her, and she said, "They played so very badly, and stopped so often, she would listen to them no longer."

On the 28th of December, after considerable exertion in the somnambulist state, she appeared much fatigued, then became very happy, and heard sweet music—a violin. A large musical box was placed close to her ear whilst playing a lively waltz. "Do you hear the music now?" "Yes." "What is it?" "A violin." "What is it playing?" "Home, sweet home." I breathed upon *Time* and *Tune*, and she said, "the music had stopped." The musical box was still playing.

Several ladies were present, who wished to hear her sing, and she was permitted to sing several songs. Whilst she was singing I again cataleptised the tongue and jaws, and sealed the lips up, and she continued. I again breathed on the organs, and stopped her in the middle of the tune, and she said, she stopped "because the music stopped—she did not know why."

On being awake soon after, she complained of pain in the forehead. "Where is it—here?" said Mr. D., placing his finger on the middle of her brow. "No, not there—on the side." She was directed to place her finger on the spot, and she raised her hand, and placed her finger precisely on the organ of *Tune*. A short time after Mr. D. said, "Did you say this was the spot where you felt the pain?"—putting his finger on the organ, when she instantly shrunk from it as if it gave her great pain, saying, "It was so very sore just there, she could not bear it touched."

Other parts of the forehead were touched, and it did not give her pain, only at the seats of *Time* and *Tune*; and she said she had not felt the soreness before, and did not know the cause, "unless we had been doing something to her during her sleep that had caused it."

On a previous occasion, whilst walking about in the somnambulist state, she was much distressed, and complained that I was leading her down a fearful "steep hill," and was immediately relieved of her apprehensions by my breathing on the organ of *Weight*.

Though I had carefully noted the foregoing acts, as confirmatory of the organs in which they spontaneously exhibited themselves, yet it never occurred to me to attempt exciting any of the other organs until Saturday the 15th ult., when I received an old "Liverpool Albion," containing a report of the experiments of Drs. Buchanan and Collyer, and then of course felt surprised the experiments had not occurred to me before.

I proceeded forthwith to test them—my first operation was on *Benevolence*, and was much surprised to find it produced effects directly contrary to those I expected: in fact, decided manifestations of *Combateness* and *Destructiveness*, which for a time rather perplexed me, so I next tried the two latter organs, and found the manifestations totally changed. I next tried *Cautiousness*, and produced *Fear* and *Despondency*, and my operations on *Hope* and *Ideality* seemed only to increase her misery; but on my again operating on *Cautiousness*, she became better, and a further operation on *Hope* and *Ideality* made her perfectly happy and cheerful. From these results I of course inferred that by one mode of operating, the organ might be stimulated to greater activity, and by another mode might be rendered incapable of its ordinary activity.

On a subsequent occasion, I had had my hand on her forehead, for the purpose of assisting her in examining the brain, and then endeavoured to stimulate the whole of the intellectual organs, and the following were the manifestations—"O, dear, I feel so well and so different; I feel as if I should like to sit and talk for hours—O, I wish I could find words to express myself—I don't know how I feel hardly; but so happy, and clear, and light-hearted—and—and affectionate like, (*Benevolence*.) And what's the cause of all this?"

"I really don't know—I feel quite a different thing—I could discuss with anybody now—on any subject—I feel capable of anything—and of talking to anybody—O, if I could but find words to express myself—I think my head must have some of yours about it, somehow, for it has more in it than ever I knew before—I'm sure I'm *cleverer* now than I used to be—do converse with me about something—any subject—what shall we talk about," &c.

I have since, on several occasions, tried other organs singly and with similar success—generally producing increased activity, but sometimes rendering them somnolent, and leaving their antagonist's faculties in unrestrained activity.

SCALE OF TEMPERATURE.

	Wedgwood's scale.	Fahrenheit Degrees.
Greatest heat—extremity of		
Wedgwood's scale	240.	32,277
Greatest heat of an air furnace 8 inches in diameter	160.	21,877
Chinese porcelain, softened, best sort	156.	21,357
Cast-iron, thoroughly melted	150.	20,577
Hessian crucible, melted	150.	20,577
Bristol porcelain, not melted	135.	18,672
Cast-iron cogins, to melt	130.	17,977
Greatest heat of a common smith's forge	125.	17,327
Plate glass furnace, strongest heat	124.	17,197
Bow porcelain, vitrifies	121.	16,807
Chinese porcelain softened, inferior sort	120.	16,677
Flint glass furnace, strongest heat	114.	15,897
Derby porcelain, vitrifies	112.	15,637
Chelsea porcelain, vitrifies	105.	14,727
Stone ware, baked in	102.	14,337
Welding heat of iron, greatest	95.	13,427
Worcester porcelain, vitrifies	94.	13,297
Welding heat of iron, least	90.	12,777
Cream-coloured ware, baked in	86.	12,257
Flint glass furnace, least heat	70.	10,177
Working heat, plate glass	57.	8,487
Delf ware, baked in	41.	6,407
Fine gold melts	32.	5,237
Settling heat, flint glass	29.	4,847
Fine silver melts	28.	4,717
Swedish copper melts	27.	4,587
Brass melts	21.	3,807
Heat at which enamel colour is burnt on	6.	1,857
Iron red heat, visible in daylight		1,077
Do. do. do. twilight		884
Heat of a common fire		790
Iron bright red in the dark		752
Zinc melts		700
Quicksilver boils		672
Lowest ignition of iron in the dark		635
Linseed oil boils		600
Lead melts		594
Bright steel becomes blue		580
Bismuth melts		476
Tin melts		442
Nitric acid boils		242
Sulphur melts		226
Water boils		212
Alcohol boils		174

Phosphorusm	Fahr. deg. 100
Heat of the human blood	98
Ether boils	98
Medium temperature of the earth	50
Ice melts	32
Milk freezes	30
Strong wine freezes	20
Alcohol water, equal parts, freezes (Zero)	7
Quicksilver freezes	39
Nitric acid freezes,	45
Temperature of Hudson's Bay	50
Acid and snow	78
Greatest cold known	91

REVIEW.

Dr. Tavernier's Treatise on the Treatment of Deformities of the Spine, by the "Lever-belt, with Inclination Bush." Translated into English by William Brewer, M.D., &c.

THIS is one of the many contrivances to cure lateral deformities of the spine by *mechanical means*; and we are much afraid that the present plan will not be found more effectual than that already in use. The plan consists in the employment of "a lever belt, with inclination bush." The apparatus consists of a broad belt, buckled round the pelvis; from the back part of this belt a lever with inclination bush arises and ascends nearly parallel with the spine; from the front of the broad belt a strap is made to ascend obliquely to the most projecting part of the chest opposite the principal curve, and carried round and fixed to the lever behind; pressure can thus be made upon the most projecting part of the thorax, and the body bent to the opposite side from the principal curve. The fatal objection to this, and to all instruments constructed upon the same principle, is, that while he bends the body to the opposite side, from the principal curve, it increases, in an equal degree, the other lateral curves of the spine; for every one knows that no lateral deviation of the spine is *single*. If the principal bend is in the dorsal region, another curvature will be found in the opposite direction, in the lumbar, and not unfrequently also in the cervical region. Now, though the apparatus may have the effect of diminishing somewhat the dorsal curve, it will necessarily impart a greater degree of curvature to the lumbar region, and the remedy must thus prove as bad or even worse than the disease. We could point out other objections to this apparatus, but as we may soon have the opportunity of referring to the state of orthopedic surgery in this country, we shall not at present enter upon the subject.

COLLEGE OF SURGEONS.—The studentship in Human and Comparative Anatomy, founded by the College, has been awarded, after a severe competition, to Mr. James Dunn, of the School of Anatomy, Grosvenor-place, on Tuesday, the 7th inst. We understand there were 13 candidates.

FOSSIL MAMMOTH.—In the excavation of the cutting for the railway at Marden, a splendid fossil elephant or mammoth (one tooth of which weighs above 20 lbs.) has been discovered 20 feet below the surface. The organic remains of this animal have never before been found so low in the series as the wealden formation, in which the cutting is supposed to be made, and appears to prove that Marden Hill is composed of a recent deposit above the weald clay. A portion of the bones are in the possession of Mr. Barlow, the engineer, at Timbridge, who is endeavouring to collect the whole animal; but, unfortunately, several waggons loads containing the remains were thrown into the embankment by the workmen. *Athenæum*.

PHARMACEUTICAL NOTICES.

On the Substitution of a Saccharine Substance for Manna. By M. Menier.—The author says, this substitution is calculated to attract attention, as the fraud appears to surpass all others, hitherto met with, of a similar nature. In fact, it has been attempted to introduce into commerce, under the name of Manna, a product which does not contain the smallest quantity of that substance, and the appearance of which so nearly resembles true manna, that it is with some difficulty detected.

A portion of this false manna was submitted to examination, with the following results:—

Physical Examination.—It has a white colour, approaching to yellow; it is gluey, and adheres to the fingers; its taste is sweet, but leaving a slight degree of bitterness: it has not the peculiar flavour of manna, its most characteristic taste being that of sugar slightly burnt. On breaking a piece of it, the fracture appears granular, but the small crystals, which are observed on breaking the genuine manna in tears, are not found in this product. When exposed to the air, it attracts moisture.

Chemical Examination.—Exposed to the flame of a taper, this product does not inflame, as pure dry manna does; it turns black, and falls in drops, which solidify on cooling. Dissolved in water, it forms a clear solution; while manna, even the most pure, furnishes a solution which is always a little opaque.

The solution of this fictitious manna affords, with re-agents, very different results from those furnished by the true manna.

1st. Oxalate of ammonia gives a precipitate of oxalate of lime with the false manna, but not with the true.

2nd. Diacetate of lead, added to the solution of the false manna, occasions no cloudiness; this is not the case with the solution of true manna, in which it causes a precipitate.

3rd. The chloride of barium gives rise to a precipitate of sulphate of baryta in the solution of false manna, but causes no precipitate in the other.

4th. Nitrate of silver colours the solution of true manna after a certain time; the solution of the false manna is scarcely changed at all.

5th. Lastly, by the acid nitrate of mercury, the solution of false manna is rendered slightly cloudy, while the same re-agent forms a flocculent precipitate in the solution of true manna.

Some of the solution of false, and also of true manna, was submitted to fermentation: the fermentation was more energetic in the liquid containing the false manna; the residue, left after the fermentation, was, with the true manna, one-half; with the false manna, one-sixth. This residue, resulting from the true manna, was soluble in boiling alcohol; on cooling, the alcohol deposited the mannite in small crystals. The residue of the false manna, treated in the same way by alcohol, did not afford the least trace of mannite on cooling.

The true manna, treated at once with boiling alcohol, afforded the mannite on the cooling of the liquid. The false manna, treated in the same way, afforded only a syrupy matter, and not the least quantity of mannite.

From these results I am induced to consider, first, That the product which has been offered to me under the name of manna, does not contain any of that vegetable secretion; secondly, That its aspect, its taste, its action with ferment, and the presence of sulphate of lime, seem to show that it has been prepared with sugar of fecula.—*Journal de Chimie Médicale*.

Note by the Editor of the Journ. de Chim. Méd.—This falsification has been doubted; we know from an authentic source that it has been made in Paris, and we could cite persons connected with the fabrication of manna from sugar of fecula.

At the meeting of the Society of Pharmacy of Paris, held the 2nd of February last, M. Mailher, with the view of removing all uncertainty as to the nature of this false manna, stated, that it was obtained by means of sugar of fecula, and that he knew the author of the fabrication.

LIST OF NEW SCIENTIFIC WORKS.

- Andrew's Cyclopædia of Domestic Medicine, &c. Animal Chemistry, by Justus Liebig, M.D. Edited from the MS. of the Author, by William Gregory, M.D.
- Barlow's Physiology and intellectual Philosophy. Brande's Dictionary of Science, 8vo.
- Chambers' Educational Course—Rudiments of Zoology, 12mo.
- Churchill's Theory and Practice of Midwifery, 8vo.
- Cousin's Elements of Psychology, by Professor Henry, 8vo.
- Curtis on Preservation of Health, 4th ed. 12mo.
- Darwin on Coral Reefs—Geology of the Voyage of the Beagle, Part 1.
- Duff's Sketch of the Geology of Moray, royal 8vo.
- Fletcher's Elements of General Pathology, by Drs. Drydale and Russell, post 8vo.
- Forbes's (S.) Climate of the United States, and its Endemic Influences, 8vo.
- Forry's (W.) Druggist's Price-book, 3d ed. 12mo.
- Green's (C.) History, Antiquities, and Geology of Bacton, in Norfolk, 8vo.
- Griffin's Scientific Miscellany, Part 8—Davy's Experimental Researches in Electro-Chemistry—Theory of Double Refraction, 8vo.
- Griffiths' (Thomas) Chemistry of the Four Ancient Elements, 8vo.
- Hall's (M.) Mutual Relation between Anatomy, Physiology, &c. 8vo.
- Hooper's Physician's Vade-Mecum, new edit. by Dr. Guy, 12mo.
- Jackson's Nature and Causes of Epilepsy, 8vo.
- Johnson's (C.) Elements of Agricultural Chemistry, 8vo.
- Johnston's (J. F. W.) Elements of Agricultural Chemistry and Geology, 12mo.
- Kittoe (W. H.) on Consumption and Asthma, 8vo.
- Lizars' Text-book of Anatomy, Part 2, 12mo.
- Lowne's Lectures on Animal Physiology, 12mo.
- Maunsell and Evanson on Diseases of Children, 4th edit.
- Mayo's Nervous System, its Functions, post 8vo.
- Medical Times, Vol. 5, 4to.
- Nesbitt's Introduction to the Arts and Sciences, 12mo.
- Paine's Therapeutical Arrangement of the Materia Medica, 12mo.
- Pereira's (J.) Materia Medica and Therapeutics, 2nd edit. enlarged and improved, 2 vols. 8vo.
- Pratt's Pictorial Catechism of Botany, sq. 16mo.
- Quain's Anatomical Plates complete, 2 vols. royal folio.
- Rauch's (Rev. F. A.) Psychology, or a View of the Human Soul, 8vo.
- Repertory of Patent Inventions, Vol. 16, 8vo.
- Salmon (F.) on Strictures, Piles, &c. 8vo.
- Shaw's Manual of Electro-Metallurgy, 8vo.
- Spillan's Manual of Clinical Medicine, 18mo.
- Tavernier on Deformities of the Spine, translated by Dr. W. Brewer, 8vo.
- Trimmer's Practical Chemistry for Farmers, &c., post 8vo.
- Wade's (J.) Systematic Zoology, folio.
- Ward's (N. B.) Observations on the Growth of Plants in closely-glazed Cases, 8vo.
- Wetzlar's (L.) Descriptions of the Mineral Springs of Aix-la-Chapelle and Borectte, post 8vo.
- White's Compendium of the Veterinary Art, 17th edit., by W. C. Spooner, 8vo.
- Wilson's Anatomist's Vade-Mecum, 2nd ed. 12mo.
- Withering's British Plants, by Macgilivray, 5th edit. 12mo.

MEDICAL MEMS. OF THE WEEK.

By PERISCOPICUS.

CASES OF MALFORMATION OF THE HEART. By BELL FLETCHER, M.D.—The first of these was one of aneurism and dilatation of the pulmonary artery, malformation of the heart and arteries. The patient was a young woman, aged 19, who, with the exception of slight cough, had enjoyed good health up to the age of 16; since that time she has had frequent attacks of pain in the chest, cough, and dyspnoea. She was first seen by

the author in August, 1839, when she had cough and dyspnoea, with slight hæmoptysis. On the left side of the sternum, between the second and third ribs, there was a superficial pulsation, with purring tremor, and a loud rasping souffle; the impulse of the heart was normal. She recovered under the use of the remedies employed, but had several similar attacks between that time and December, 1840, when she had severe inflammation of the lungs. At this time the pulsation of the chest mentioned above was more extensive, the souffle louder, and it had assumed a *see-saw* character, masking the sounds of the heart. The patient lingered for some time, and though relieved by treatment, died rather suddenly on May 1.

Examination after Death.—Our account of the appearances must be confined to the state of the heart and great vessels. The heart was about twice its natural size; its parietes of the natural thickness; the dilatation being equal in all the cavities. The right auricle, excepting the dilatation and hypertrophy, perfectly normal; the tricuspid valves healthy. The auriculo-ventricular opening is dilated, so as to render the valves somewhat ineffective. In the right ventricle the columnæ carneæ are thicker than normal; the orifice of communication with the pulmonary artery is much dilated. Immediately below the opening is a communication with the left ventricle, which measures about one-third of an inch across, and one-eighth from above downwards. The two anterior semilunar valves are perfect, of the normal size, but much thickened; the posterior one imperfect, being so narrow and constricted in its middle portion as to be a mere band-like projection from the artery. The pulmonary artery is much dilated, being five inches and three quarters in its greatest circumference (internal measure); the branches of the pulmonary artery are much dilated. The left auricle is healthy, save the dilatation and hypertrophy; the auriculo-ventricular opening is dilated; the mitral valve is normal in structure, but not sufficient to close the dilated opening perfectly. In the left ventricle the columnæ carneæ are thicker than usual, and at the base of the cavity is seen the opening of communication with the right ventricle. The opening of the aorta is rather dilated; semilunar valves healthy. The ascending aorta is dilated about one-half beyond its normal size. The distribution of the arteries from its arch may be considered more as divisions of the artery than branches. After giving off these it is contracted to about one-third of its capacity in the ascending portion, and the walls of the vessel are thinned in this situation. This contraction extends from the root of the left subclavian to the joining with the ductus arteriosus, where the artery is still further contracted by a hardened thickening of the coats, projecting into its interior, so as to contract the capacity again to about one-third: so that at this point the capacity of the artery is not more than one-ninth of its ascending portion. Just on the distal side of the constriction is the communication with the ductus arteriosus, and immediately below it, the artery is dilated to the usual size of the descending aorta.

The second case was one of cyanosis; the subject of it a young man, aged 21. He had great dyspnoea, palpitations, anasarca, and a blue state of the skin generally. The heat of the body in the axilla, or mouth, was not more than 80 deg. of Fahrenheit; the state of puberty was not developed. The impulse of the heart was greater than normal; there was a bruit de souffle beginning with the first sound of the heart, sufficiently long to mask the second; it was heard most distinctly under the middle bone of the sternum.

Examination after Death.—The heart and large veins enormously distended with dark-coloured blood; the organ much enlarged and hypertrophied. The septum of the auricles so totally absent as to convert the auricles into one; the veins of the general circulation enter it on the right side of a line drawn in the situation of where the septum should be. The auriculo-ventricular openings are large, and between them the septum of the ventricles is much notched out. The orifice of the aorta is contracted to a third of its usual capacity, and its semilunar valves are diseased and ineffective. The liver much congested and enlarged, about a third more than its usual size.

CANCER.—M. Tanchou does not consider cancer a contagious disease. Medical men regard the complaint as not being contagious; and if they employ the term "cancerous virus," it is rather for the purpose of explaining its reproduction and diffusion throughout the economy, than with reference to its contagiousness. The experiments of M. Tanchou confirm the generally entertained opinion. He took the matter from open cancers of patients at Salpêtrière, and introduced it into divers parts of their bodies, without producing the slightest effect. Dogs were also inoculated with matter taken from a cancer of the breast; they were ill for a short time, and seemed on the point of dying, but the wounds healed like common incised wounds.

STRICTURE OF THE URETHRA.—M. Civiale presented some additional observations on stricture of the urethra, founded chiefly on post-mortem examinations. The first point which he notices is the difficulty and danger of catheterism in cases where the stricture is complicated with disease of the prostate or neck of the bladder, giving rise to deviation, &c., of the posterior portion of the urethra. On examining a great number of pathological preparations, he has been convinced that it is almost always impossible to reach the bladder with the catheter commonly employed, without making a false passage. The second point refers to the effects of stricture on the parts seated posteriorly to it. A knowledge of these effects, says M. Civiale, is of the greatest assistance to us in the diagnosis of stricture. They are, first, inflammation of the mucous membrane; second, abscess in the walls of the urethra; third, formation of cellules or sacs in the urethra; fourth, lacerations of the canal; fifth, lesions of the prostate; sixth, various diseases of the genito-urinary organs. Another point to which M. Civiale especially directs the attention of practitioners is, that the effects of stricture on the urethra will be considerably modified according as the bladder is or is not hypertrophied.

FUNCTIONAL DISEASES.—Professor Walshe observes, "it seems scarcely comprehensible, in truth, that the disturbance of a function can persist without implication of the instrument performing it. Which is the more likely—on the one hand, that continued disturbance of function without organic change is a possible occurrence; or, on the other, that organic change really exists in all cases of disease, and only appears to be wanting in some of them, because we are unable to detect it. There can be little hesitation, it appears to me, in adopting the latter as the more probable case. But it may be considered that this is an *a priori* argument. I appeal then to experience for its justification. I rest my conviction that in all probability the existence of pure functional or dynamic diseases is destined to be ultimately proved unreal, upon the fact that the number of such diseases has considerably decreased, and continues to decrease, since the study of pathological anatomy has been actively pursued under the guidance of modern science. An example or two may

be worth adducing. How greatly has the catalogue of pure functional asthmas been reduced by the discovery of pulmonary emphysema! The discharge of alkaline urine was once believed to constitute an essential disease, and the phosphatic diathesis is even still talked of in this light; but anatomy has shown that this modification in the constitution of the urine depends upon a certain mode of inflammation of the kidney. Numerous forms of dyspepsia, formerly believed to be merely functional, are now known to depend upon structural change of the stomach; and that very common malady of children termed 'infantile remittent,' and which was long supposed to be a pure idiopathic fever, is now known to consist fundamentally in a sub-inflammation of the mucous membrane of the stomach and intestines. Similar examples might be adduced from the pathology of many other organs."

SORE NIPPLE.—Mr. R. Davis, of Worship-square, Finsbury, mentions a case where the summit of each nipple was completely sloughed off, and such was the pain whenever the infant took the breast, that the mother contemplated weaning it. Several remedies were used without affording relief; the last remedy applied, and that which proved successful, was the lunar caustic in substance. The surface of the sore was touched with it every morning, and the nipple was then covered with a piece of wet lint; the child was not allowed to suck the nipple under treatment, but was supported from the other breast, the draught of milk in the unused breast being excited by friction. Under this treatment both nipples were healed in a comparatively short time.

GALL BLADDER.—The gall bladder has its own diseases, but they seldom become the objects of specific treatment. Sometimes it is found shrivelled up and empty; sometimes enormously distended; sometimes ruptured. Of these conditions, the distension of the gall bladder is the only one that we can ever expect to recognise in the living body. The bag then projects beyond the edge of the liver, and is palpable externally, forming an elastic tumour on the right side. Authors lay down marks for distinguishing a distended gall bladder from abscess of the liver, and from hydatid cyst; but they are not much to be trusted to, nor is the precise diagnosis of any great moment. The practical rule seems to be that, when the swelling is adherent to the parietes of the abdomen, we may puncture it whatever is its nature; but under no other circumstances.

AMBIGUOUS CASE OF NEURALGIA.—Some years ago (says Dr. Watson) I was sent for by an exceedingly intelligent surgeon, who had been one of the house-surgeons at the Middlesex Hospital. I found him in bed. He told me he had a pain in the abdomen. It had begun in the morning in the situation of the right kidney, and soon extended round to the right side of the abdomen and groin. Two days before, he had experienced a similar attack of pain in the renal region, stretching round into the hypogastrium. When I saw him he described the pain as lying more round the umbilicus than elsewhere, and he expressed a strong persuasion, from the feelings which attended it, that it would be removed by free action of the bowels. But he felt nausea, and had vomited some medicine which he had taken. He had no fever, no retraction of the testicle or numbness of the thigh, and the pain was not increased on pressure. Neither had there been any marked irritation of the bladder. He said, indeed, when I questioned him on that point, that he *thought* he had made water *rather* more frequently than usual the day before. I mention this case to show you the occasional obscurity of the symptoms. Here a well-instructed

medical man believed that nephralgia, existing in his own person, was colic. To my judgment, however, it seemed most probable that a small calculus had been passing from his kidney towards and perhaps into his bladder. His bowels were well acted on by a purgative, and the next day he was free from pain, and apparently well. Two days after this he had more frequent calls to pass urine than were usual with him, and having done so on one occasion, he presently felt the want again, and then passed a little blood. The urine had been of a clear amber colour throughout. At the expiration of two or three days more he called upon me to say that after making water he had perceived in the vessel a small crystallized mass, which he took out, supposing it to be (what it very much resembled) a small fragment of sugar candy. In fact, he had been eating sugar candy, and thought some portions of it had fallen down between his waistcoat and shirt, and afterwards into the chamber-pot. He had the curiosity, he said (some misgivings he must have had too, for I had told him my own opinion of the nature of his attack), to put a small crystal from this fragment into his mouth; and as it neither tasted sweet nor dissolved, he suspected it might be a urinary concretion, and brought it to me. And sure enough it was so; a piece of very pure oxalate of lime, which he had been fortunate enough thus to get rid of. It was a quarter of an inch in length, and less than one-eighth of an inch broad, consisting of an aggregation of small crystals. It was exactly similar in appearance and colour to a piece of brown sugar-candy of the same size. It would pass longways into a large crowquill. That it was oxalate of lime was proved in this manner. A little separate crystal was heated to redness on a piece of platinum foil, by means of a spirit lamp and blow-pipe. By these means the oxalic acid was destroyed, and quick lime left. This residue, moistened, and pressed into a powder on a piece of turmeric paper, gave the characteristic brown colour.

MEDICAL NEWS.

THE FIRST ANNUAL MEETING OF THE PHARMACEUTICAL SOCIETY.—We have received an account of this meeting, with the Report of the Council. The following passages in the latter have some importance:—"In carrying out their plans for the educational and scientific objects of the society, the Council have not suffered their minds to be distracted from due attention to the circumstances which originated the institution, nor have they been unmindful of any occurrence in which the customary privileges of the trade appear to have been involved, or neglected to obtain every information necessary for their guidance, either from legislative or judicial proceedings. They have also been in communication with the government, from whom they have received an assurance that no measure shall be introduced into Parliament affecting the chemists and druggists without due notice of such intention being given to the President. An interview has been had with the College of Physicians, upon the subject of the examination of all future chemists and druggists, in which the Council of the Pharmaceutical Society have signified their intention of claiming the privilege of possessing the control of the same, should it be included in any legislative measure." An account of the subscription and expenditure in opposition to Mr. Hawes's Bill in 1841, gives a balance in hands of the Treasurer of £145 12s. 11d. This does not belong to the society, but remains at the disposal of the subscribers to that fund. The accounts of the Pharmaceutical

Society, from January 1st, 1841, to March 31st, 1842, give a balance in its favour of £4017 14s. 7d.—*Benevolent Fund.* The Council are desirous of drawing especial attention to this fund—they have received some few donations to it, but have not hitherto made any particular exertions in its behalf. Looking, however, at the objects which are contemplated in its institution, and as, in order to ensure its beneficial effects upon a safe and permanent basis, it has been thought necessary not to allow it to come into operation till its income amounts to £300 per annum, they feel sure that it will commend itself to the consideration of the affluent and the benevolent, and obtain some liberal and additional support, so that its benefits may be dispensed at no very distant period. The Council, after due consideration, recommend the sum of £500 to be invested in the names of the trustees for this especial purpose, agreeably with the law made to that effect.—*Plan for Examination, after July 1, 1842.* The Board to consist of President and Vice-President of the Society, with eight dispensing Chemists. One physician and one public professor to attend as visitors. The Board to sit monthly. A minor examination for Associates, and a major examination for Members. The examined to produce testimonials of having been apprenticed to, or regularly educated by a vendor of drugs or dispenser of medicines. The text-book of examination to be the London Pharmacopœia, and questions. The candidate to translate medical prescriptions, and to demonstrate his acquaintance with practical pharmacy. He must also be conversant with the antidotes for common poisons. The minor examination admits an Associate according to the laws, who shall receive a letter from the Secretary, intimating that he has been found qualified to act as an Assistant to a chemist and druggist. A candidate on passing the major examination, shall be admitted a Member according to the laws, and receive the diploma. Apprentices, previous to the execution of their indentures, shall be examined as to their knowledge of the Latin language. The Council do not at present intend to impose any fee on the examination of Members and Associates, beyond the subscription. Every apprentice after July 1st, 1842, shall pay the sum of five shillings on the registration of his indentures, if bound to a member of the Society; if the master is not a member, the fee shall be ten shillings and sixpence. Every apprentice not registered at the Society's Office before the 1st of July, 1843, or within twelve months after the date of his indentures, shall pay a fine of one guinea, on presenting himself for examination as a member or associate.

MEDICAL ASSOCIATION OF IRELAND.—The fourth anniversary meeting was held on Wednesday, the 25th, and Thursday, the 26th ult., the President, Mr. Carmichael, having read an address, from which we extract the following passages:—"Complaints have been urged from time to time, of which the poor-law commissioners have taken full advantage, of disreputable practices with respect to dispensaries. It is urged that those institutions are frequently got up where they are not required, merely to serve particular individuals.—That subscriptions are obtained under a compact from the candidate that, if successful, he will attend and supply medicine gratis to the subscribers and their families. Now these and other degrading jobs, if true, are very disreputable to the profession, and call loudly for some controlling power. It has, therefore, been suggested by the College of Surgeons, and others, that Government should form a board of medical men to regulate and control the medical charities of Ireland, which would

report their proceedings and suggestions directly to the Lord Lieutenant, and not through the medium of the poor-law commissioners. Such a board might confer essential benefits upon the profession and the country, provided that no patronage be conferred upon it, which may afford an opportunity for jobbing. Therefore, I would not wish to see such a board possess any other power in the election of medical officers than simply a vote, if the successful candidate should not be duly qualified. Permit the members of such a board to determine, before election, on the qualification of candidates, and they become virtually the electors. Give them patronage in any shape, and their object will be to turn their board into a recruiting dépôt for patients from the country, and a registry office to enrol the names of pupils, friends, or dependants for appointments to all the medical institutions of the country." * * * Adverting to the new bill of Sir James Graham, Mr. Carmichael considered that considerable improvement from that state of anarchy and disorganization, into which the profession had fallen, must arise from its provisions. The appointment alone of a Central Council to regulate the profession, hitherto without any controlling power, must be productive of great amendment. This Central Council is to consist "of one of her Majesty's principal Secretaries of State, of four persons (not professional,) appointed by the Queen in Council, of two Fellows of the College of Physicians, and two Members of the College of Surgeons of London, one Physician and one Surgeon from Edinburgh or Glasgow; and one Physician and one Surgeon from Dublin. The professional members of the Council to be appointed by the Crown, in the first instance, absolutely, afterwards from a list of five nominated by the several Colleges. Edinburgh and Glasgow to nominate alternately." Provision is also made that the Secretary of State shall be President.—This mode of selecting a Council to regulate the profession, although, at first, absolute, on the part of the Crown, leaving but little power afterwards in the Colleges, as a selection is to be made by the Crown of one from five members, returned by each College, effects great improvement in the profession.—Though not one of the objects which medical reformers have in view is, as already noticed, stipulated in this bill, yet they may all, in a great measure, be accomplished through the instrumentality of this central board. Thus, no mention is made of a good preliminary education, and none of equality of qualification. But quite the reverse, as two grades of practitioners are provided for—the one, that of the general practitioner, whose knowledge is to be tested by an examination "in surgery and anatomy by the College of Surgeons—in medicine, midwifery, chemistry, and pharmacy, by the College of Physicians, assisted by deputies, to be chosen by the Apothecaries' Company. The course of study and nature of the examination to be according to a scheme agreed upon by the several Colleges, and approved of by the Council." * * * The ordeal, which the higher grade in the profession has to undergo, is intimated under the following head:—"Special examinations by the College of Physicians, are to be held of those who wish to proceed to the degree of doctor of medicine, and by the College of Surgeons for the degree of master in surgery. A necessary condition for being admitted to this examination to be a greater age, and either an extended time of previous study, or practice for a definite time after going through both the examinations (those for the general practitioner, I presume,) by the College of Physicians, and the College of Surgeons." * * * There is no

provision made in this bill to permit physicians and surgeons to officiate as general practitioners. But if they have qualified in physie, surgery, and pharmacy, I can see no discrepancy in permitting them to do so, if it is either their pleasure or interest. But if they lose caste, by entering into the province of the general practitioner, it is only reasonable that they should, as long as they remain in this position, be excluded from the enjoyment of the privileges or honours peculiar to the higher grade of the profession.—I am happy to find that the Apothecaries' Act of 1815, (which granted to the Apothecaries' Company of London the power to examine and license practitioners in medicine) "is to be amended conformably to the proposed Act"—that is, the company is to be deprived of a power which ought never to have been granted to it.—Were we to seek for the *beau ideal* of medical reform, the practice of pharmacy should be separated altogether from the practice of medicine. But as these two branches have been long united in England, any attempt to separate them would be unwise, and prove unsuccessful. * * * Prohibitory laws against empirics and unqualified persons can never succeed, therefore the Government, in their bill, wisely decline any interference with them, while every encouragement is afforded to those who are duly qualified. Thus it is proposed to enact that "none, but those registered by the Central Council, shall be appointed to any medical or surgical office in the army, or navy, or East India service, or in any public hospital, infirmary, dispensary, workhouse, or other public institution. Unregistered practitioners not to be entitled to the exemptions from serving on juries, &c. &c., claimed by medical men, nor shall their certificates be received in any case in which by law the certificates of a medical man is required."—I should have been glad to have seen amongst the heads of this bill some provision for the moral training of medical students.—"That this Association feels deeply indebted to the Right Honourable Sir James Graham, for having, as Minister of the Crown, taken up the long-neglected subject of the regulation of the medical profession, and that the outlines of Sir James Graham's proposed bill are satisfactory to the association, in so far as they tend to provide for equal education, equality of privileges for those equally educated, a registration of medical practitioners, the encouragement of the scientific apothecary, and the establishment of a supreme board of control."—Dr. M. said, the College of Physicians of London had determined upon altering their character, so as to take into their body every graduate in medicine, now practising in England and Wales, who might choose to join them. Their fellowships would in future be opened to graduates of any British university, and would be arranged in the following manner:—They would be limited to 200, and all death or other vacancies occurring among them during each year would be filled up by election from among the licentiates, who would meet annually with the fellows, and choose from among themselves persons to fill the vacant fellowships. The licentiates would in future be called members, and would enjoy all privileges of practice, and access to the library and museum of the college; but the power of electing the president and officers of the college would be reserved for the fellows. The College of Surgeons of London intended not to limit the fellowships in number, but to make them attainable upon an examination higher than that for the ordinary member, and to be passed at a more mature age—he believed 25 or 26. Persons practising pharmacy would not be suffered to become fellows; but they might become so at any time

upon giving up such practice, and complying with the other conditions. Now, he (Dr. M.) believed that the Irish medical corporations would probably adopt analogous changes in their constitutions—that is, they would be disposed to admit into one or the other every properly qualified practitioner in Ireland. He did not speak officially, as the colleges had not yet done any public act; but he thought such a feeling as he spoke of was very general among the members of those bodies. What he said with respect to the colleges applied equally to the Apothecaries' Company, who were, he believed, prepared to open their corporation upon a liberal plan (Hear, hear.) If this were done every practitioner in Ireland would be connected with, and might have a voice in, an Irish college; and as the central board of control was proposed to be formed, to a certain extent, of representatives from the colleges, of course, so far, each practitioner would be represented on it. Now, this board of control was to be endowed with power to enforce a similar education and similar regulations for the obtaining of diplomas and the conducting of examinations, throughout all the colleges, and thus the heads of the bill tended to produce equality in education. Equality of privileges for those equally educated was also provided for by establishing a minimum of qualification, without possessing which no person would be considered as a medical man, or permitted to act as such in any public capacity whatsoever. The way in which the general practitioner was proposed to be qualified was by his passing an examination in surgery at the College of Surgeons, and one in medicine and pharmacy before the College of Physicians, and examiners chosen by the Apothecaries' Company, associated for the purpose with that college. A person so qualified would be registered by the supreme council as a general practitioner, but upon no other terms could he be so registered, and thus a minimum qualification was provided which conferred an equality of rights throughout the three divisions of the empire. The registration of medical practitioners was also provided for by the machinery of the central council. By that council a registry was to be kept and made public from time to time, so that all people in authority would at once know, by a reference to the list, who was, and who was not, a legal medical practitioner. (Hear, hear.) The encouragement of the scientific apothecary would, he thought, be effected in Ireland through the medium of the privilege now enjoyed by the Apothecaries' Company, of preventing persons from acting as apothecaries without their license." Mr. Blackley, of Beechill, moved, "That this Association has witnessed with sincere pleasure, the establishment of a good understanding between the several medical corporations, and that we are prepared to cooperate cordially with the Colleges of Physicians and Surgeons, and with the Apothecaries' Company, in their present praise worthy efforts to accommodate their respective constitutions to the wants of the profession, and to render Sir James Graham's bill a practical and safe-working measure."—Dr. Macartney said he had been present on the preceding evening at the College of Physicians, when a report was received from the committee, recommending them to seek for an equal number of delegates from Ireland and Scotland, as from England, and he thought that Association should join them in seeking for that act of justice.—Dr. Nugent said, that the deputation of the Association waited on Mr. Lucas at one o'clock that day. We distinctly told Mr. Lucas, that the unanimous feeling throughout the country was, that we should be kept quite clear from the control of the poor-law commissioners. In reply, Mr. Lucas stated

that the principle would be adopted of not admitting of any measure that would be conflicting with the present poor-law bill in Ireland, and that, consequently, when they meant to bring in a measure affording medical relief to the poor out of the public funds, those funds should be raised with the poor-rate, and that so far as the fiscal arrangements should be dovetailed into the provisions of the poor-law, the power of the commissioners would be intact, but that the machinery of the bill should be so adapted, as that the medical arrangement and general government should be in the hands of a medical board. And though there would be four powers operating—namely, the Lord Lieutenant, the Medical Charities' Board, the Local Governors, and the Poor-Law Commissioners—he would so contrive it, and the authority of each would be so well defined, that they would be all kept strictly within their several departments—confining the interference of poor-law commissioners to the fiscal arrangements made for the medical government, under the jurisdiction of the medical board.—Dr. Macartney then moved, "That we desire to express, in the most distinct manner, our disapprobation of the measure for the regulation of the medical charities of Ireland, which has lately emanated from the poor-law office, and that we do so upon the following grounds, viz.:—1stly, Because, as British subjects, we can never consent to the enactment of a statute, giving to a single individual the power of visiting with unlimited fine, imprisonment, and hard labour, offences against that individual's arbitrary will. 2ndly, Because, as Irishmen, we are unwilling to permit the last remaining tie between the rich and the poor of our country, viz., that formed by the medical charities, to be broken; and 3rdly, Because, as members of a profession hitherto honourable, we cannot accede to its being placed under a control which we believe must prove fatal to its honour and independence."—On Thursday, shortly before 9 o'clock, the Association resumed, Dr. Lane, of Wexford, in the chair.—Dr. Maunsell then begged to move the following resolution:—Resolved—"That we have learned that the proposed Medical Charities' Bill was drawn up and printed without the knowledge of the Attorney or Solicitor-General, or Under-Secretary for Ireland; that it was pressed upon the notice of Lord Eliot under misrepresentations, that nobleman having been incorrectly informed by Mr. Nicholls, the chief poor-law commissioner, that its provisions had been made known to, and approved of, by certain eminent medical practitioners of Ireland; that some of these gentlemen denied the truth of Mr. Nicholls' statements, in his own presence, and before Lord Eliot; and that we, therefore, consider him unfit to be permitted to give any opinion as to the management of interests so important as those of the medical charities of Ireland.—Dr. M. said that the bill was brought forward without the knowledge of those high authorities (Hear). That this bill was pressed on the notice of Lord Eliot by misrepresentation, he would show by the following facts:—Dr. Nugent and he, as soon as they were informed that a bill would be brought before government—they did not know it was then printed, but they heard that a bill, based upon Mr. Phelan's report, would be brought forward—waited upon Lord Eliot, and were accompanied by Lord Bernard, the member for Bandon. Lord Eliot said such a bill had been brought in, but that he knew little about it, and that Mr. Nicholls was the person who had the charge of it. He also said that he would be glad if he (Dr. M.) and Dr. Nugent would meet Mr. Nicholls in his office and discuss the measure, and that in the meantime he would be most happy to re-

ceive from them any suggestions or observations upon its heads that they might think proper to make. They stated at once that they had not the slightest objection to meet Mr. Nicholls and discuss the matter with him, and would wait in town for that purpose. They also wrote out suggestions at considerable length, which they sent to Lord Eliot, and got an answer from him that he had received them, and they should get his consideration. In a short time afterwards, Mr. Nicholls came to town, and he had several long interviews with Lord Eliot. They saw and spoke with him in the waiting-room of the Irish Office, but they never heard one word more of the interview suggested by Lord Eliot, though Lord Eliot had solicited them to hold that interview, and asked them if they had any objection to do so, and they stated they had not. At a subsequent period, they had an interview with Mr. O'Hanlon, and he said that Mr. Nicholls had the consent of the "heads of the profession" in Ireland to the measure, and he mentioned the names of Sir Henry Marsh, Sir Philip Crampton, and Drs. Graves, Cusack, and Carmichael. Mr. Cusack, who was present, denied that he had ever expressed his approbation of the measure to Mr. Nicholls, and stated that he had heard Sir Henry Marsh and Sir Philip Crampton distinctly declare their disapproval of it. Mr. Carmichael has since denied that he ever gave Mr. Nicholls any opinion on the subject (hear, hear.) Mr. O'Hanlon thought, of course, as Mr. Nicholls represented to Lord Eliot, that they did approve of it. Sir Henry Marsh and Drs. Cusack and Stokes had an interview subsequently with Lord Eliot. Mr. Nicholls was present, and again said, as he (Dr. M.) understood, that he had the approbation of the heads of the profession, and that he had the approbation of Sir Henry Marsh. Sir Henry Marsh said he had no conversation with him about it. Mr. Nicholls observed—"Yes, you had a conversation with me about it on the railway, (laughter.) Sir Henry Marsh replied that the only conversation they had was, that Mr. Nicholls asked him his opinion about the bill, and he said he had not read it. Dr. Stokes also, then and there, stated, that he was acquainted with the sentiments of Dr. Graves, and that he could distinctly state that he was altogether opposed to the views of Mr. Nicholls. Dr. Armstrong proposed the next resolution—"That it is our opinion that the report and supplementary report, upon the medical charities of Ireland, published by the poor-law commissioners, contain many unfounded statements; that the truth has been, in many instances, suppressed in these publications, and that they therefore do not furnish safe and sufficient information whereon to found any legislative measure."

MEETINGS FOR THE ENSUING WEEK.

MON. Botanic Gardens, Chelsea, 9 a.m.
— Geographical Society, half-past 8 p.m.
TUES. Royal Medical and Chirurgical Society, half-past 8 p.m.
— Zoological Society, half-past 8 p.m.
WED. Geological Society, half-past 8 p.m.
— Botanic Gardens, Regent's Park, 1 p.m.
THU. Royal Society, half-past 8 p.m.
FRI. Botanic Gardens, Chelsea, 9 a.m.

ADVERTISEMENTS.

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COURSE OF LECTURES ON THE THEORY AND PRACTICE OF MEDICINE.

Delivered by C. J. B. WILLIAMS, M.D., F.R.S., Professor of the Practice of Medicine, and of Clinical Medicine, at University College.

GENTLEMEN,—We shall now proceed to the special business of the course, and shall commence with the consideration of *Etiology*, or the *Causes of Disease*.

The first obvious division of these causes is into *external* and *internal*; the former consisting in the application of some extraneous agent, the latter having its origin in some more strictly *internal* condition: thus, for example—inflammation of the brain may be the result of exposure to the rays of the sun, which would be regarded as an *external* cause of the complaint; or, on the other hand, a similar inflammation may be induced by great *mental anxiety*, which we should rightly define as an *internal* cause of the phrenitis. And both these divisions, as thus applied, we class under another general division, viz., *exciting* causes.

Now, in some instances the simple application of an *exciting* cause is sure to be followed by some morbid consequences; and when this is the case, we should say that the action of such cause was *absolute*. Thus, we know that the contact of a hot iron, or strong caustic, with the surface of the body, will be productive of *inevitable* diseased changes in the tissues to which such application is made; also, that the administration of poisonous substances will not fail to give rise to certain results. But the operation of exciting causes is not *always* attended by nearly such definite effects, the association of a constitutional tendency being required to enable the exciting agent to determine the sequence of the morbid phenomena; and this constitutional tendency forms what is called the *predisposing cause* of the disease. This term is applied, not only to the state by which a certain exciting cause succeeds in the production of any disease *at all*, but also, and especially to the *peculiar form* which such diseased action shall assume. Let us suppose, for example, a number of persons submitted to precisely the same amount of cold and moisture; would each suffer from precisely the same disorder? Certainly *not*. But we should find one complaining of *sore throat*, another of *rheumatism*, a third of *pleurisy*, and so on; while some of the party might actually escape without a single unhealthy symptom of *any* kind supervening: so that you see the operation, or non-operation of the cold and moisture (the *exciting* causes), is determined, to a great extent, by the *predisposition*, or condition of the *system*.

The exciting and predisposing causes are also termed *remote* causes, in contradistinction to what are designated *proximate*, or, I think much more correctly, the *pathological* causes of disease, whereby we mean the *actual lesion*, which is the immediate foundation of the symptoms of which our senses are cognizant: thus, for example, the *pathological* cause of the commonest species of

apoplexy, is *extravasation of blood* on the surface, or into the substance of the brain.

Remote Causes.—Let us now examine a little more particularly the *remote* causes, viz., *predisposing* and *exciting*. The respective share which each of these has in the production of disease is subject to great variation. We have seen that an exciting cause will, if of certain *intensity*, determine disease without any predisposition at all; thus, if a man in perfect health were to sleep upon a marsh in an ague district, there could be little doubt that he would contract the malady, although not in the least degree *predisposed* to its reception. So, again, may a *predisposing* cause give rise to morbid symptoms, without the addition of what, under general circumstances, we should denominate an *exciting* cause; thus, a person having a very weak and easily deranged stomach, will suffer an attack of dyspepsia, from merely eating a small quantity of really *wholesome* food, which in a healthy subject would not be productive of the slightest inconvenience.

There is a certain *resisting power* to disease in the system, which must be overcome before disease is able to be manifested; this power was called by Cullen the "*Vis Medicatrix Naturæ*." We witness its operation in various instances. Thus, the vascular re-action that occurs in a healthy subject after exposure to moderate cold, is a means whereby the injurious effects of such cold upon the system are counteracted. It is seen also in the removal from the alimentary canal of hurtful substances, by vomiting or purging, excited by the presence of these very substances themselves, and thereby the system is protected from any further unfavourable influence. In the same manner, too, is this force exerted in the elimination of malarious poisons from the body by the increased secretions and excretions which such poisons may occasion, and so by the occurrence of diarrhoea, diaphoresis, &c., the constitution may be preserved from the most serious invasions of disease. We may consider that predisposition to disease generally, consists in the *absence or impairment* of this counteracting power; it may also arise from *new positive* conditions being present. We shall now enumerate some of the principal *predisposing* causes, and we shall find that they are chiefly of a *debilitating* nature, enfeebling the functions by weakening the circulation, or by increasing the susceptibility of the nervous system.

These causes may be divided into those that are *accidental or acquired*, and into those that are *constitutional or hereditary*.

1st. *Accidental or acquired*.—Among these we may enumerate,

1st. *Starvation*, depending on deficiency either in *quantity* or nutritive *quality* of food. This increases the liability to low fevers and low inflammations, especially to *scrofulous* diseases, also to the influence of epidemics and contagion. It diminishes in every way the *resisting power*.

2nd. *Confinement in impure air*.—We are not quite sure how this operates; it may be either by diminishing the excretion of matters that ought to be eliminated, or by such matters, when eliminated, hanging about in contact with the body, and thus being again absorbed,—just as a plant will, if not supplied constantly with new soil, die by the absorption of its own excrementitious matter.

3rd. Low, *damp* situations dispose to scrofula, and tend to give inflammation a scrofulous character.

4th. Excessive exertion, whether of body or mind, causes exhaustion, and thus renders the system liable to the reception of disease. Exercise, in moderation, is beneficial to both, but the excess of it will not fail to enervate.

5th. The long-continued application of *heat* (especially when combined with moisture) unrelieved by the occasional influence of cold.—By

such a condition the perspiration is rendered profuse, the muscular fibre is relaxed, and the liver especially suffers by the alteration thus made in its supply of blood. We may suppose that in consequence of a large quantity of the watery part of the blood being carried off as perspiration, the portion conveyed to the internal organs will be rendered more concentrated, and the liver in particular subjected to the influence of a more stimulating fluid than previously, whereby, as a natural result, its action is unusually excited, and if this cause continue to operate for a length of time, its function must become impaired.

The weakening effects produced by exposure to great heat are too well known to require further comment. The habitual indulgence in unnecessarily warm clothing, whereby a continual perspiration is kept up, must obviously be injurious, and should be carefully avoided; it enervates the system, and renders it less able to resist disease.

6th. Excessive and long-continued *cold* is another predisposing cause. The *moderate* application of cold is decidedly beneficial, reaction is excited, and the whole frame invigorated; but if the degree is beyond that whereby reaction is insured, a *sedative* effect will undoubtedly be produced, and consequently the vital energies be *depressed*. Hence it is, that after long and severe winters there is so great a tendency to the prevalence of epidemics assuming a typhoid character.

7th. Another fertile source of predisposition to disease is *habitual intemperance*, or the frequent use of intoxicating liquors in such quantities that the *depressing* effects following the exciting effects are greater in proportion than such previous excitement. The abuse of spirits is especially injurious. The nervous centres are the subjects of constant over excitement and exhaustion. The mucous membrane of the stomach is in a state of perpetual irritation. The liver is stimulated beyond its natural amount, by the repeated absorption of alcohol into the blood that supplies it, and the kidneys are taxed and exerted until their function can no longer be sustained, and thus all the most important organs become liable to morbid changes which must inevitably undermine the whole constitution, rendering it susceptible of disease, and giving to the disease itself a more intractable character than it could otherwise have assumed.

8th. Depressing passions of the mind have a considerable influence over the impairment of health. This is illustrated by the fact of the most timid and anxious persons being frequently the most certain victims to epidemic and contagious maladies. It has also been seen in the remarkable increase in the inroads and fatality of fever among soldiers upon the arrival of unwelcome and depressing tidings. These facts are too well established to admit of dispute.

9th. The efficiency, as debilitating and predisposing causes, of *excessive evacuations* must be evident. Thus hæmorrhages, if of frequent occurrence, cannot fail to induce a cachectic state, for if the blood, which is the *food* of the functions, be extensively withdrawn, the functions themselves must be imperfectly performed. The same observation applies in a more limited degree to other discharges from the body—thus, long-continued diarrhoea very speedily reduces the powers of the constitution, and so of other evacuations. There is, perhaps, nothing more debilitating than the excessive secretion of the *seminal fluid*.

10th. We may notice that the state of convalescence is attended by great proclivity to disease. Thus we frequently find whooping-cough and measles succeeding each other: how common also is the supervention of inflammation during recovery from fever, and this arises, no doubt, from the weakening effects of the fever upon the *vascular system*, thereby increasing its susceptibility.

11th. Proclivity is often caused by *disease itself*: for example, a child that has once been the subject of croup, is very liable to a return of it when exposed to cold. The same liability is shown also in cases of rheumatism, sore throat, chorea, epilepsy, and many other instances in which one incursion of the affection renders the individual particularly liable to a repetition or continuation of its influence.

12th. We find that *local fulness* of an organ is favourable to the production in it of local inflammation. Examples of this fact are found in the case of the uterus during menstruation, and of the mammae during the period of lactation.

Fulness of the vessels of the system *generally*, resulting either from too free living, or from the excretions being defective, also predisposes to various diseases—such as gout, disordered state of the liver, apoplexy, &c.

Lastly, we may consider *organic lesions* as predisposing causes of disease. Thus, for instance, a man who is the subject of organic disease of the heart, may, upon the application of some exciting agent, be cut off by a fit of apoplexy, whereas such excitement might have been insufficient to produce the fatal result had the heart been in a perfectly healthy condition.

I have now mentioned the most important of the accidental or acquired predisposing causes that operate in the production of disease, and we shall, in our next lecture, pass on to the consideration of the "constitutional predisposing causes."

COURSE OF CLINICAL LECTURES ON PNEUMONIA.

Delivered at the Hospital La Charité, by Professor CHOMEL.

LECTURE XX.

X. *Pneumonia complicated with affections of the pericardium, the heart, and large vessels.*—1st. *Pericarditis* seldom complicates pneumonia unless this latter disease be accompanied by intense pleurisy. The state of the patient then becomes very alarming. This complication does not obscure the diagnosis of pneumonia by percussion, auscultation, and inspection of the expectorated matters; some of the functional and general disturbances alone are remarkably modified. Thus the pain and dyspnoea assume new characters; the febrile symptoms are more or less altered; the pulse becomes contracted, unequal, and irregular; the febrile heat sometimes diminishes; the expression of the face assumes a peculiar character, &c. But as we may readily perceive, these modifications affecting neither the physical signs of pneumonia, nor those of the expectoration which accompanies it, do not prevent our discovering this latter disease. In all cases, irregularity of the pulse supervening in the course of pneumonia, should lead the physician to examine with great care the region of the heart. It frequently, in fact, announces a commencing pericarditis or endocarditis, provided the patient be not affected with organic lesion of this organ, and especially of its valves. Observation has proved that the frequency of this complication is greater in pleuro-pneumonia of the left side than in that of the right; this fact would seem to prove that this disease takes place by extension of the inflammation from the vicinal parts. What we have just said on the subject of pericarditis is in great part applicable to the *endocarditis* which sometimes complicates itself with acute pneumonia, and especially pneumonia of the left side.

2nd. When pneumonia supervenes in the course of some *organic affection of the heart* with infiltration of the thoracic parietes, percussion furnishes no certain sign; auscultation, as we have said, is far from constantly furnishing positive characters; the unaccustomed dyspnoea, and the greater frequency of the pulse, may be explained by the aggravation of the disease of the heart; cough, also, frequently accompanies the organic affections of the heart, which are often complicated with bronchitis and bronchorrhoea. We have merely, then, the expectoration left to guide us by; and I have already observed that we sometimes see reddish or rusty-coloured sputa arise in the course of organic affections of the heart, without the slightest trace of pneumonia; hence we may conceive the

great difficulty which even an experienced and attentive practitioner will meet with in cases of this nature. Still it is rare that we do not find some circumstances relating to the signs of pneumonia, and especially to the progress of the affection, which throw sufficient light on the diagnosis to authorise the physician to employ suitable remedies.

3rd. I have previously said, that *sanguineous concretions in the heart and large vessels* are not unfrequently formed in the course of acute pneumonia; and, according to M. Boulland, this complication may in most cases be positively diagnosed, or at least announced as probable. Such a complication in general modifies but very little the physical signs of pneumonia; the reverse, however, takes place with regard to the functional and sympathetic disturbances which accompany it; they frequently clothe it with different characters, thereby rendering its diagnosis more difficult. Thus in the midst of the acute and distressing condition which determines the formation of these concretions, the dyspnoea is rapidly augmented to a degree of suffocation or imminent asphyxia; the pneumonic pain is replaced by inexpressible anguish; the cough and expectoration are suppressed or modified; the pulse becomes irregular, intermittent, small, and contracted, or else so frequent as not to be counted; at other times, there supervenes a comatose state with stertorous snoring; an icy coldness spreads over the extremities, and in a short time over the whole body. These phenomena are exceedingly liable to obscure the diagnosis of the pneumonia, unless the patient have been seen previous to their occurrence. Still a circumstance which may guide the practitioner is, that such a complication is especially observed in strong and plethoric individuals, in whom the blood presents a thick buff and a rich and consistent clot, at the same time that the pneumonia is very intense and extended. When this complication supervenes, the danger is so pressing that it entirely absorbs the attention of the practitioner, whose whole efforts should be directed towards combating a state of which the issue is almost always rapidly fatal.

XI. *Pneumonia complicated with various Affections of the Digestive Tube, or of the Peritoneum.*—A pseudo-membranous angina sometimes complicates itself with pneumonia. In a patient whom I observed in 1833, there supervened, during the last days of life, a membranous exudation which quickly invaded the pharynx, the oesophagus, the larynx, and vicinal parts of the trachea. The great danger induced by such a complication may be readily imagined. We have seen, when speaking of the anatomical condition of the digestive tube in individuals who have sunk under pulmonary inflammation, and from the symptoms furnished by this apparatus, that pneumonia often complicates itself with various acute affections of the stomach and intestine. I shall here merely remark, that such complications do not at all modify the physical signs of the pulmonary inflammation, and that, notwithstanding the rapid suppression of the expectoration, and the adynamic symptoms which then frequently supervene, the diagnosis of the pneumonia is easily established, provided, at least, that we carefully have recourse to the employment of percussion and auscultation. When pneumonia complicates itself with peritonitis, it may, with great facility, remain latent; in fact, from the pains induced by the change of position in the patient, it becomes impossible to practise percussion and auscultation; the cough is also, in many cases, small, dry, and painful, and the dyspnoea may be explained by the intestinal tympanitis pressing up the diaphragm.

XII. *Pneumonia complicated with various Affections of the Secretory Organs.*—*Hepatitis* and pneumonia in the second stage, existing simultaneously, might lead the observer into error with regard to the extent occupied by the two affections. One might, in fact, be inclined to attribute a portion of the dulness to the hepatitis, or *vice versa*. We must, to avoid such an error, bear in mind the natural limits of the liver and of the lung, remembering, at the same time, that on a level with the hepatized pulmonary parenchyma we often hear some disseminated bubbles of crepitant r  le, with bronchial respiration and bronchophony—pheno-

mena which are not discovered over the region of the liver. Another error into which such a complication might lead the observer, consists in mistaking it for an attack of bilious pneumonia, properly so called from its being attended with jaundice and bilious expectoration; such an error might induce us to administer emetics, when antiphlogistics alone are really indicated. Pneumonia sometimes supervenes in the course of *Bright's disease*: I here merely refer to this complication, to warn you against being led into error by the condition of the urine, a condition which might wrongly be considered as *critical*.

XIII. *Pneumonia complicated with various Cerebral Affections.*—Pneumonia is ordinarily accompanied by a certain degree of *cerebral congestion*. In some cases this congestion acquires such a degree of intensity as to constitute a grave complication. *Apoplexy* may also supervene in the course of pneumonia. These complications are merely mentioned with a view of reminding the practitioner of the great obscurity which they throw over the diagnosis of pneumonia, even rendering it latent, unless percussion and auscultation be carefully had recourse to in every case. The *delirium*, so often observed in the course of pneumonia, appears, in an immense majority of cases, to be entirely sympathetic. Sometimes, however, it is symptomatic of a more or less intense arachnitis. Thus, out of fifty patients in the hospital, four were affected with arachnitis perfectly characterised by delirium, and in whom, after death, there was found a sero-purulent infiltration in the sub-arachnoid cellular tissue. This arachnitis was developed only during the last 24 or 36 hours of existence. When arachnitis is complicated with pneumonia, it powerfully modifies some of its general and functional symptoms. Thus, the respiration becomes slow and irregular; the pulse becomes less frequent; the pain ceases; the expectoration is wanting; and the pneumonia may easily remain latent. The danger of not recognising the pneumonia is still greater when this affection supervenes in the course of *meningo-encephalitis*, and when the individual is already enfeebled by the disease itself, as well as by the often energetic treatment to which he has been subjected. The pneumonia is then developed secretly, and is frequently announced only by a slight cough, even which is wanting in some cases. Lastly, the pneumonia which supervenes in *paralytic* patients, or in *idiots*, can most usually be discovered only by percussion and auscultation.

XIV. *Rheumatic Pneumonia.*—According to some ancient authors, the rheumatic virus or principle, on quitting the articulations or muscles, instead of attacking the pleura, the pericardium, the heart, the membranes of the brain, or the digestive tube, sometimes affects the lung itself, which becomes the seat of a more or less intense inflammation. This species of inflammation presents among other characters, the property of suddenly lessening or disappearing, when the rheumatic affection regains its original seat, whether spontaneously or under the influence of irritating applications to the regions previously affected. Rheumatism, on the other hand, in some rare cases, supervenes in the course of pneumonia, forming itself the complication. This occurred in three cases out of fifty under my care. In two it was articular, invading both shoulders in one patient, and both knees in the other; it lasted but a few days: in the third individual it was muscular, and attacked the right side of the trunk. What showed this to be a simple coincidence, was the fact that the three individuals offering this complication were not subject to rheumatism. M. Louis has also remarked that pains existed in the limbs of four-fifths of the fatal cases of pneumonia which he has seen, as well as in the majority of those which recovered.

XV. *Pneumonia arising in the course of Chronic Affections in general.*—We frequently observe pneumonia in the course of various chronic affections. M. Louis discovered that the development of this affection, a short time before death, is not peculiar to subjects affected with phthisis. He has also observed it, in almost a similar proportion, in other chronic diseases. In 112 subjects who died after prolonged chronic affections, 12 had

a more or less considerable part of one, sometimes of both lungs, red, grained, and hepatized. Engorgement was present in 10 others; and in these, as in the phthisical patients, the history of the symptoms showed that the inflammation had preceded death by a few days only. A more or less violent shivering, pain and dyspnoea suddenly appearing, will particularly direct the attention of the practitioner to the respiratory passages; but we must also remember that the pneumonia, in these cases, will often remain latent, unless we have careful recourse to percussion and auscultation. In all instances, such a complication accelerates remarkably the death of the patient.

XVI. *Pneumonia supervening in the course of Acute Affections in general.*—When pneumonia supervenes in the course of acute inflammations, accompanied with depression of the vital powers, its invasion, instead of exciting reaction, is ordinarily announced by a sudden and fatal prostration. Its diagnosis invariably presents great difficulties, and without percussion and auscultation it may altogether escape our notice.

We here terminate our examination of the local complications which exercise a marked influence over the diagnosis, progress, duration, termination, and treatment of pneumonia; but we have still to consider those complications consisting in the *dynamic* or *humoral* state of the patient.

1. *Adynamic Pneumonia.*—Pneumonia, as well as erysipelas, phlegmon, cystitis, or most other inflammations, presents sometimes adynamic symptoms of greater or less intensity. Sometimes the pneumonia, after offering its ordinary symptoms, changes in character, and becomes accompanied by adynamic phenomena; at other times these phenomena appear from the first, and even at the moment of invasion of the pulmonary affection, as we frequently see in old men. Considered in relation to its causes, adynamia appears sometimes to arise from the absorption into the blood of substances of a more or less deleterious nature; a subject of which we shall shortly have occasion to speak, when considering the humoral state of the patient. Sometimes adynamia appears essentially to combine itself with a peculiar state of the nervous and muscular systems of the subject, as we frequently see in infants and old men; both these causes are occasionally combined in the same patient. Adynamia, the characters of which we cannot here stay to describe, alters remarkably the general symptoms, as well as the usual functional signs of pneumonia: the febrile movement is often wanting; dyspnoea, pain, cough and expectoration, are sometimes absent, and we are merely enabled to discover the inflammation by means of auscultation and percussion. These two modes of exploration are also the principal means of distinguishing, in some cases, pneumonia from typhoid fever; still we must not fail to take into account the age of the subject, the conditions by which he is surrounded, the *ensemble* of the symptoms which he presents, and especially their progress and duration. True adynamia should be carefully distinguished from *pseudo-adynamia*. In some individuals, in fact, we find great feebleness; they can neither move nor sit upright; the pulse is weak, small, sometimes thready; there appears a true state of adynamia; and still if we abstract blood, we see that in proportion as the blood escapes, the depression of the patient diminishes, his face becomes reanimated, the pulse grows fuller, and an open and perfect febrile movement becomes developed. To establish, between these two states, a distinction so important with respect both to prognosis and treatment, we must bear in mind that *pseudo-adynamia* supervenes, especially in young plethoric men, of strong constitutions, and who have not been weakened by anterior disease; that it often appears during the first stages of the malady, before even any lowering means have been employed. We must also examine attentively the state of the veins, which we sometimes find distended with blood, the condition of the heart, the violent pulsations of which form a remarkable contrast with the smallness and weakness of the pulse. Percussion will show, in some cases, the extent of the præcordial dulness, and the abundance of the blood which distends this organ. We may also engage the patient to cough, and afterwards to

make a deep inspiration; the pulse will then become suddenly full and hard, the blood being enabled more easily to traverse the lung. We shall, moreover, remark the proportion or disproportion existing between the extent and intensity of the pneumonia, and the debility of the patient. *Pseudo-adynamia* once being suspected, we should employ a trial blood-letting, checking or maintaining the flow of blood, according to the effect induced in the economy.

2. *Ataxic Pneumonia.*—What we have previously said of cerebral complications, and more especially of delirium, as well as what we shall hereafter have occasion to state when treating of the employment of musk, will enable us to dispense with dwelling upon that irregular condition which sometimes complicates pneumonia, and which more or less aggravates the prognosis of the disease.

A LECTURE ON STRYCHNINE AND NUX VOMICA.

Delivered at the Royal Medico-Botanical Society, by J. C. COOKE, M.D. F.R.S., Professor of Toxicology to the Society.

ALTHOUGH the fact, that the majority of the species in the genus *Strychnos* possess very active, and, in many cases, poisonous properties had been long known to the profession, and individual practitioners had from time to time reported their experience of these powers in the treatment of disease; yet much obscurity had, until the last few years, hung over the natural history and medicinal properties of the whole genus, much of which, especially in relation to the medical properties, was still far from being removed. A stimulus, however, had been given to the subject, by the adoption, in the last Pharmacopœia, of the nuts of the *strychnos nux vomica*, one of the most active of the genus, and of the alkali, *strychnia*, prepared from them. To this species Dr. Cooke intended to confine his observations almost entirely. The genus *strychnos* belongs to the natural order, *apocynaceæ* of Lindley, *luridæ* of Linnæus, and *strychnæ* of DeCandolle, who separated it from the *apocynaceæ* of Jussieu, and appears to have confined his order nearly to the genus. In the Linnæan classification it is placed in *pentandria-monogynia*; in that of Dr. Lindley, in *subclass monopetalæ*, group *dicaipnosæ*. The order *apocynaceæ* is distinguished by being corollifloral exogens; calyx divided into 5—persistent, corolla, monopetalous, hypogynous, regular; 5 lobed with contorted aestivation, deciduous; stamens 5, arising from the corolla; styles 2; stigma 1. The fruit is a double follicle; leaves opposite, quite entire, and without stipules. Inflorescence usually corymbose. The whole order contains not more than half-a-dozen European plants. They are readily known from all other orders by the above signs, especially the opposite leaves and bifollicular fruit, except from the *aselepiadaceæ*, and from that order, by the latter (united by DeCandolle to the *apocynaceæ*) having the filaments connate, and the pollen waxy. The medical properties of the order *apocynaceæ* are very variable, some of the species being perfectly mild and harmless (chiefly amongst the herbaceous, and especially when young); others being poisons of the most deadly description. As instances of the latter class, the *upas* (*strychnos tienté*), the *woorali* (*strychnos toxifera*), and the *tanghin* (*cerbera tanghin*, or *c. manghas*), may be adduced, and the *willughbeia edulis* of the former. Many species of the genera *vallea*, *nreola*, and *cameraria*, yield caoutchouc in abundance, and of good quality. It is probable, however, that all the *strychnos* species possess properties more or less poisonous. Still it is curious to observe, that even in these the pulp of the fruit is innocuous, and is greedily eaten by birds. Much additional very interesting matter concerning the uses of the various *apocynaceous* plants will be found in Sir Whitelaw Ainslie's *Materia Indica*, from which most of the common accounts of this order have been compiled. The official species, *s. nux vomica*, is rather remarkable, from the fact, that whilst its entire structure is quinary, and consequently exogenous, the leaves, which in the number of their nerves are also most frequently quinary, in the disposition of them affect the endogenous form, having them convergent and curvilinear. It is an East Indian plant,

growing freely in Malabar, Ceylon, and along the coast of Coromandel, where it is called by the natives *caniram*, under which name it was figured by Rheede in the *Hortus Malabaricus*. By Roxburgh, it was described in his *Plants of Coromandel* under its present name. It and a neighbouring species were known to the Arabian writers, by whom, or their translators, the nuts of the two species seem to have been described indifferently as *nux vomica*, and *nux methel*. Dr. Pereira considers their *nux methel* to be our *nux vomica*, and the substance spoken of by them under the latter name, as the product of the *s. ignatia*. By the vulgar in this country it is called *ratsbane*. It is a middle-sized tree, with a short, thickish, and crooked trunk, irregularly branched, and covered with a smooth, ash-coloured bark. The leaves, in addition to the characters given in the definition of the natural order, are smooth, and polished on both sides, petiolate, ovate, and varying from one-and-a-half to four inches in length, and from three to four inches in width. The flowers are small, greenish-white, collected into small terminal corymbs, or cymes, and appearing in winter. The fruit is a globular berry, about two inches in diameter, and consists of a hard, smooth, orange-red shell or rind, with a soft, pulpy mesocarp, containing several (usually five) seeds, which adhere to a central placenta. These seeds are the only part which is officinal in our Pharmacopœias, though every part of the tree is stated to be possessed of medicinal properties—the bark, wood, and root being used in India as bitter tonics in the treatment of intermittents. The seeds are round, flat disks, about three-fourths of an inch in diameter, two lines in thickness, more or less concave on one side, and convex on the other, with the hilum in the centre of the ventral surface. They are covered by a velvety coating, which consists of very delicate silky hairs, which do not rise directly up from the membranes to which they are attached (the testa), but slope obliquely from the centre towards the circumference; immediately under the testa is found another very thin and perfectly simple membrane, the *endo-pleura*, which invests the nucleus, or kernel. This nucleus consists of a large quantity of condensed albumen, with a central cavity, and of a dicotyledarous embryo, the site of which is discovered in the seed by a projection. The whole of the seed, except perhaps the coverings and hairs, is poisonous. The nuts, owing to the state of extreme condensation of the albumen, are so excessively hard as to be incapable of pulverisation by the ordinary means—they require filing or rasping. The nuts, the alkaloids obtained from them, and the whole plant, are much more poisonous, and more quickly so in carnivorous than in herbivorous animals—in some, purely herbivorous, the plant seems even to have no effect. Goats and hogs are said to feed on it with impunity, and a fowl had daily for three weeks, at first sixty grains of the powdered seeds, then one hundred and twenty grains, and was destroyed at last by the enormous dose of one hundred and sixty grains, and four grains of the extract. Horses require some ounces of the powdered seeds to kill them, whilst dogs die from doses of one scruple, or half a drachm; and Dr. Christison has seen a large dog destroyed in two minutes by one-sixth of a grain of *strychnia* injected into the pleura. May not this immense difference be ascribed to the greater facility with which the herbivora would assimilate vegetable matter though poisonous? When speaking of the antidotes, in cases of poisoning, in the human subject, there will be occasion to refer back to this difference in the effects of the drug on carnivorous and herbivorous animals.

The two alkaloids contained in the *strychnos* nuts, and to which their activity is owing, are *strychnia* and *brucia*, in combination with *igasurie*, now *strychnic acid*; in the bark and other parts of the tree, *brucia* alone is said to exist, and in combination with *gallic*, not *strychnic acid*. Although still called by separate names, there now seems no reason to doubt, which was always suspected, viz., that the two are really identical, the *brucia* differing from the *strychnia* chiefly in being combined with some resin and colouring matter, from the latter of which it is very difficult to free it. These accidental combinations explain most

of the chemical differences. These are numerous, but the most obvious are the greater solubility of brucia in alcohol and water, and its being coloured red by nitric acid and chlorine, *pure* strychnia always remaining unaltered. The difference in solubility is great. Water at fifty degrees requires 7,000 times its weight to dissolve strychnia; brucia, however, requires only eight hundred times its weight. At two hundred and twelve degrees, two thousand five hundred times its weight are necessary for strychnia, but only five hundred times for brucia. The plan of isolating the strychnia, adopted by the Pharmacopœia, so far as the brucia is concerned, is based on the difference in their solubility in alcohol, which difference is nearly as great as in water. In order to get rid of the brucia, we are directed, after separating the strychnia from the other matters, and as the last step in the process, to redissolve it in hot alcohol, and again crystallize, the intention being for the spirit to retain the brucia in solution when the strychnia has by the evaporation been gradually crystallized out. The whole of the Pharmacopœial process is too long, and the changes too complicated to be detailed in a lecture, but the principle is readily understood. Dissolve out, by using a proper menstruum, the active principle and its acid; remove the latter by the addition of some base (in this case magnesia) for which it has a greater affinity than for the strychnia; the strychnate of magnesia thus formed is dissolved in the water, whilst the strychnia is precipitated. All that now remains to be done is to separate the latter from the colouring matter, &c., which is done by repeatedly forming it into a soluble sulphate (the impurities subsiding), and precipitating it with ammonia, the brucia being at last removed by the plan given before, though not entirely, as shown by the strychnia got by this process tinged with nitric acid. Indeed, the new Edinburgh Pharmacopœia says it is never met with pure. As thus obtained, strychnia is a white, odourless, intensely bitter substance (so intense, that one grain dissolved in six pounds of water, i. e., in six hundred thousand times its weight, is distinctly perceptible to the tongue) in octohedral or four-sided prismatic crystals. If the crystallizing process be conducted more speedily than by spontaneous evaporation, which is directed by the Pharmacopœia, the crystals will be granular. By heat it fuses and is decomposed. The bitterness is intense and long continued, the first effect being despite of, and the latter probably in consequence of its slow solubility, a small portion very likely remaining upon the tongue, and taking a considerable time before becoming entirely dissolved. It has a very decided alkaline reaction, and forms salts with acids, having even the power of separating many metallic oxides (the alkaline substances excepted) from their acids. The salts which it forms are in most instances (as in the majority of the vegetable alkalies) much more soluble than the strychnia itself, and consequently more potent. This must be borne in mind when prescribing the drug. From its extreme activity, and from the uncertainty as to the degree of violence with which it will act, (owing probably to the quantity of acid present in the stomach affecting its solubility,) together with the ascertained fact of the powers of brucia being identical in kind, varying only in degree, would it not be better at once to use the latter? That strychnia should always be given with fear and trembling, every one who has had experience of its effects must acknowledge. The College, too, adds its warning in the direction "*hand temere adhibenda est.*" One pound of the nuts are said to give about half a drachm of strychnine; on this calculation one-sixteenth of a grain of strychnia is equal to eight grains of nux powder. The other principles discovered in the nux vomica seeds are yellow colouring matter, resin, wax (?) gum, starch, bassorin, a concrete oil, ligneous and saline matter. None have much activity.

The composition of the bark is more simple. Besides the gallate of brucia before mentioned, Pelletier and Caventon discovered only fatty matter, gum, yellow colouring matter, and sugar. This bark is not used in British practice, but was nevertheless a few years ago the cause of many fatal accidents. From some cause or other it was introduced into this country, and owing to the close general resemblance was used largely in place of

Angustura bark in this country, but still more extensively abroad. So many deaths occurred in consequence, that many of the continental governments issued orders prohibiting physicians from prescribing Angustura bark any more. For a long time it was not understood what this false kind of Angustura bark really was; it is now, however, ascertained beyond a doubt, by the sagacity and perseverance of Dr. O'Shaughnessy in India, and Dr. Pereira in this country, that it was the bark of the strychnos nux vomica. Even at the present time Cusparia bark has not recovered from the shock which its credit then received, and though a useful remedy but is seldom prescribed.

The symptoms induced by the false bark were exactly analogous to those observed in cases of poisoning by the nux vomica seeds. From what has been stated, it will be evident that the individuals so destroyed must have been killed by brucia.

But what are the powers of the nux vomica, and of the alkalies it contains? Curiously enough, in popular opinion, none at all upon the human subject. In Stephenson and Churchill's Medical Botany it is stated that a case occurred, apparently within the knowledge of one of those gentlemen, in which a jurymen, at an inquest on the body of a person poisoned by this substance, asserted that he had not known, previously to that morning, of the poisonous power which the nuts have, and that he should, without hesitation, have swallowed a dose of it had it been presented to him! To those, however, who have seen anything of its use, no doubt can remain that it possesses the most tremendous powers. But what are they? To answer this question, it will be necessary to examine the effect produced by doses of different degrees of intensity. Dr. Pereira makes three distinct stages. These, however, may be reduced to two, as his second class of effects is usually the result of perseverance with the doses which produce the first. According to this new arrangement, the question just put would resolve itself into—1. What effects are induced by therapeutical doses continued, *a* for a short time; *b* for a longer time? 2. What effects are brought on by poisonous doses? 1. The first question will have to be answered somewhat briefly, as this is a lecture chiefly on the toxicological effects of the substances under consideration. When nux vomica is given in substance, i. e. in powder—in doses of five grains; or in the form of the alcoholic extract, and in doses of half a grain to two grains; or strychnine beginning with one-twelfth of a grain, in each case guardedly increased, there is evident proof that the drug is a powerful tonic and stimulant. Take a case of dyspeptic hypochondriasis, in which there is great debility of the muscular and nervous fibre, the latter complicated with the irritability of weakness, and it is found that under the action of the remedy the digestive faculty becomes improved; the tone of the muscular organs, whether of voluntary or involuntary life, is ameliorated; the nervous irritability diminished; the pulse becomes fuller and stronger, though not increased (a constant peculiarity of this drug in all doses) or even diminished, in frequency; and the different secreting organs perform their offices with greater regularity and in due quantity: thus we have the kidney, perhaps previously torpid, participating in the general bracing of the system; the liver, sluggish and indolent, roused into activity; and the bowels enabled, by the increased vigour of their muscular fibres, to contract more briskly on their contents, and thus the troublesome and most depressing constipation so constant an attendant upon these diseases of debility is removed. The functions of the body being thus improved, the mind speedily regains some portion of its lost elasticity, and cheerfulness takes the place of gloom and depression. In this way the nux answers the purpose of a diuretic, a purgative, and an alcoholic stimulant, without being any one of the three. If, however, these doses be persevered in for a sufficient length of time, or if they be increased in quantity, sometimes, too, from idiosyncrasy alone, a new set of symptoms supervene, which demand from the practitioner the most watchful care. These are peculiar and characteristic, and when aggravated, cause death. The first indications that the system is coming under the influence of the drug are referable to a deranged and excited

state of the muscular and nervous systems. The patient loses the perfect control of his muscles; starts at every external impression, and suffers much anxiety. External stimulants, as light, sound, cold, &c., morbidly impress him. The muscles when used take on a degree of rigidity, or act tremblingly. The individual totters on attempting to walk. If the drug be continued, trismus comes on, and according to Dr. Mason Good, stupor, and other symptoms of narcotism. He, however, is almost the only one who has observed this as a prominent symptom. The rigidity and imperfect control over the muscles begin to be distinctly spasmodic, and manifest a tendency to assume a paroxysmal form. The sudden contact of external bodies acts as an electric shock upon the body, and coughing, sneezing &c., produce a great aggravation of the symptoms. The pulse, as has before been remarked, is quiet and tranquil, except, perhaps, during the convulsive attacks. A patient in this state is in much greater danger from the remedy than from the disease, be it what it may. The treatment to be pursued is to stop the exhibition of the drug, to keep the patient in a state as nearly approaching absolute rest as possible; to give ammonia, opium, and other antispasmodics and cordials; and to remove any part of the drug which may have escaped digestion by a solid purgative, as castor oil. By this mode of treatment, the symptoms just detailed will usually be found gradually to disappear. Many others are enumerated by authors, but depending upon peculiarities in individual cases. They are not sufficiently constant to be looked upon as diagnostic or necessary.

Lastly, in poisonous doses, the symptoms succeed each other in a series, which although tolerably distinct and regular, nevertheless is disturbed by a number of circumstances. Much depends (but data are wanting to calculate exactly how much) upon the magnitude of the dose; upon the state in which it is received into the stomach, whether dissolved or merely suspended in water; upon the condition of that organ as to its contents; upon the health of the individual at the time of taking it, and lastly, upon idiosyncrasy. The greatest amount of disturbance, however, may perhaps be expected from the second and third of these heads. If the poison be received into the stomach in a state of solution, and the stomach itself be empty, or nearly so, the impression made upon the system—whether by absorption of the poison or by impression—will be greatly hastened from the number of points of contact upon the nervous centres, afforded by the unprotected condition of the gastric mucous membrane; the march of the symptoms will be quicker, and their intensity increased.

The symptoms induced by this poison, under ordinary circumstances, and taking the average of reported cases, seems to be well exemplified in the case published some years ago by Mr. Ollier, surgeon to the Westminster Dispensary. He was called to a young woman who had swallowed three drachms of the nux vomica, and attended her until she died, which was in about one hour and a half after taking it. The symptoms were alarm, spasmodic rigidity of the whole muscular system, profuse perspiration, urgent thirst, difficulty in swallowing from spasm, absence of pain, repeated paroxysms of violent muscular contraction, each becoming more urgent than the preceding, without struggling, vomiting, lividity of countenance, dyspnoea, failure of the pulse, and death. After death, contrary to what usually happens, the body continued rigid and stiff.

From this summary it will be seen that there were six or eight prominent symptoms. First, the extreme anxiety; secondly, the urgent thirst; thirdly, the state of intense nervous excitement; fourthly, the peculiar tetanic form of the convulsions; fifthly, the clearness of the mind; sixthly, the absence of all pain; seventhly, the dyspnoea amounting to asphyxia.

To these, in ordinary cases, must be added a state of excessive and morbidly nervous irritability, causing, on applying any external stimuli—as the common atmospheric air, touching any part of the body &c., strong tendency to a paroxysm of the spasms.

There exists a strong resemblance between the

symptoms of poisoning by *nux vomica* or strychnia and hydrophobia; and it really seems that the former was on more than one occasion mistaken for the latter. Dr. Sigmond states that in 1828, the wife of a man who had died in Guy's Hospital of hydrothorax, begged for the stomach to be examined, for that he had some years before taken *nux vomica*, which had produced symptoms that had been treated as hydrophobia. It is not unlikely, that some of the reported cases of cure of that disease have really been instances of this form of poisoning. Indeed, acting on the doctrine of Hahnemann, that "*similia similibus curantur*," two or three cases of hydrophobia have been treated by *nux vomica*. One was seen by Dr. Sigmond in the Charing-cross Hospital—the other was treated by Mr. Davey, of Portsea. Both proved fatal.

What is to be done with an individual suffering from these effects of *nux vomica*? On reference to the authorities, much discrepancy of opinion will be found; some even fairly confessing not only that no chemical antidote is known, but also that the remedies to be exhibited are by no means agreed upon, or their action very intelligible. Dr. A. T. Thomson merely says, "Evacuate the stomach and bowels, and then dilute freely with vinegar and water, or other acidulous drinks"—a practice which, as in the case of opium and other narcotic or narcotico-acrid poisons, is likely to aggravate the evil.

M. Drapiez states, that he has ascertained by numerous experiments that the fruit of the *Fenillea Cordifolia* is a powerful antidote against many vegetable poisons. He made a number of experiments with animals to which he administered *nux vomica*, henbane, rhus toxicodendron, &c., and he found that those which were treated with the antidote recovered, whilst those left to themselves died. It does not appear, however, that anything has been done to confirm or disprove his statements. Emmert, of Tübingen, and others recommend coffee and tea. Dr. Donné directs the stomach pump to be used instantly, or an emetic of sulphate of zinc, the fauces being at the same time tickled with a feather to excite vomiting. Bromine, iodine, and chlorine, he states, must be administered within ten minutes, otherwise they will be of no avail. He thinks highly of them if properly administered. Dr. Pereira speaks doubtfully of all these means except the astringents, and suggests that as conia is the counterpart of strychnia, paralyzing the motor columns of the spinal marrow, it deserves a trial. He used it in a rabbit, when it arrested the convulsions, though the animal died. When conia cannot be obtained, the extractum conii should be used as a substitute. Opium also has been advised for the purpose of arresting the convulsions. Ammonia, musk, camphor, and other real or fancied antispasmodics have been at different times recommended. The mode of treatment most likely to be successful if the case were seen sufficiently early, would be to use the stomach pump without delay, injecting warm water into the stomach in order to dissolve the strychnine, and cause its easy removal; in the absence of the pump, give a metallic emetic without much dilution, as if the emetic failed to act, the quantity of fluid, dissolving the poison, would give more points of contact to produce an impression on the stomach. When there is reason to believe that no further portion of the poison will be brought up, give tea, coffee, infusion of galls, and other astringents. To relieve the spasms, give opium or conia, as suggested by Dr. Pereira; perhaps the warm bath might be useful with the same view. To remove the exhaustion and depression consequent on the spasmodic paroxysms, ammonia or hot brandy-and-water seem to be well adapted. In cases where the effects of the poison have advanced so far as to produce syncope, or apparent death, artificial respiration should be had recourse to, and be persevered in until evidently useless. We have one difficulty here, however, which will discourage our efforts, viz., that the heart appears to be almost the first organ to die, and thus our endeavours to excite it to action must be fruitless. A ray of hope breaks in upon us here from the facts, that

the number of cases in the human subjects has been too small to prove that this death of the heart takes place as early as in animals; and this perhaps, the more, as man is placed by his organization midway between the carnivora and herbivora.

The *S. ignatia* is even more active than the *S. nux vomica*. Both adhere firmly to the mucous membrane of the stomach, and are generally found there after death. It produces the same effects as *S. nux vomica*, and is to be treated in the same way.

How much of either will prove fatal? This will depend upon several circumstances, but chiefly on the two points before mentioned—whether the poison be dissolved or not at the time of its reception into the stomach; and whether that organ be full or empty. The smallest dose known to have proved fatal to man, is fifteen grains of the powdered nuts. In Mr. Ollier's case, three drachms were taken. Dr. Christison is of opinion, that half a grain of strychnia thrust into a wound might kill a man in less than a quarter of an hour.

In endeavouring to detect these substances after death, we shall have much difficulty in isolating them from organic matter. We may suspect them if the matter found in the stomach be intensely bitter, and turn first orange red with nitric acid, and then golden yellow. The best plan of proceeding, is to pursue the directions of Orfila and Barruel, which are to boil the contents of the stomach in distilled water, acidulated with sulphuric acid, which, if *nux vomica* be present, will become reddish. Filter the liquid, then neutralize it with carbonate of potash, and evaporate it to dryness. Then act on the dry mass with successive portions of alcohol, and evaporate to the consistence of a thin syrup. Ammonia precipitates this; it becomes deep orange red with nitric acid, owing to the brucia present in the *nux vomica*, and will deposit, if left standing a day or two, crystals of strychnine. To become absolutely certain that these are crystals of strychnine, and thus avoid all possibility of quibbling on the part of counsel, the process advised by Dr. A. T. Thomson for distinguishing one alkaloid from another should be followed. His directions are:—"Treat the substance with nitric acid, which is coloured red with brucia, delphia, morphia, and strychnia of commerce. If the reddened acid become of a violet colour on the addition of protohydrochlorate of tin, the alkaline powder is *brucia*—if the reddened acid gradually turn black and carbonaceous, it is *delphia*—if the powder be soluble, without decomposition, and decompose iodic acid, it is *morphia*—if it does not decompose iodic acid, it is *strychnia*. If the powder greens instead of reddening nitric acid, it is *solanina*—if it be insoluble in ether, and does not redden nitric acid, it is *emetia*—if it be soluble in ether, does not redden nitric acid, and melts when heated, and volatilizes, it is *atropia*—if it is thus affected by ether and nitric acid, but is not volatilized, it is *veratria*." By these two processes it will be easy to recognise strychnia; it must be observed, however, that Dr. Thomson's tests refers to strychnia contaminated with brucia, a state in which it is always met with in commerce.

The post-mortem appearances, in a case of poisoning by *nux vomica*, are by no means constant, or very satisfactory. Much will depend upon the length of time after taking the poison, before death come on. If some hours, there will probably be congestion of the heart, lungs, brain, and spinal cord. If death happens within a quarter, or half an hour, there will probably be no unnatural marks. In these cases, however, there is a much better chance of detecting the poison in the stomach. How does it act? Obviously upon the nervous system, and demonstrably upon the spinal marrow; for, 1st, convulsions come on when strychnia is given to a decapitated animal; 2nd, they attack parts supplied by nerves arising from that part of the spinal marrow which is inferior to the point at which a section is made; 3rd, they can be entirely prevented by destroying, with a wire, &c., the spinal marrow; and 4th, there are no cerebral symptoms, unless the extreme anxiety be viewed as implicating the brain, or a narcotic principle be developed by decoction, or other processes to which the drug may have been subjected. It is probably

in this way that it is found to intoxicate, when used, as it often is, in beer, for the double purpose of giving the bitter taste, and producing speedy intoxication.

Death is produced in one of three ways—1st, by asphyxia from the spasm preventing the respiratory muscles acting; 2nd, by exhausting the nervous irritability of the heart; 3rd, by causing constriction of the coronary, and other arteries. This constriction of the arterial system is always met with. Dr. Thomson has seen the aorta of dogs reduced to the size of a crowquill. The coronaries not being able to supply the heart, would throw that organ into a state of syncope, which would be fatal. With regard to the question, whether the poison, to produce its effects, becomes absorbed, or acts merely by impressing the nervous system, authorities are at issue. Dr. Thomson thinks that it is never absorbed, and views this as an encouraging circumstance in the treatment, as indicating that efforts to neutralize or destroy should not be limited to any period of its operation. On the other hand, it has been shown that the blood of animals poisoned by strychnia, will poison other animals, although attempts at proving its existence in that fluid have hitherto failed. One curious question remains, to which no allusion has as yet been made. Why are paralysed muscles the first to be affected in cases of palsy treated by strychnia? Two explanations have been offered—1st, Segalas says that the muscles of the healthy part are subjected to the influence of the will, and therefore are enabled to resist the action of the drug, whilst the paralysed muscles being destitute of the cerebral influences are compelled to obey the only stimulus they have. 2nd. Dr. Marshall Hall says, that the phenomenon is observed in only one kind of paralysis—that depending upon cerebral lesions—in which the irritability of the muscular fibre is increased, as proved by voltaic electricity, and that in such cases strychnia first affects the paralysed muscles, because they are more irritable than the sound ones.

Neither of these explanations are satisfactory. Dr. Pereira has completely disproved that of Dr. Hall, by showing that paralysed muscles are less irritable than sound ones, whether the paralysis be cerebral or spinal; and that the paralysed muscles are first affected in every kind of paralysis.

As a therapeutical agent, strychnia has been found serviceable in anaurosis, mania, melancholia, chorea, epilepsy, dyspepsia, dysentery, enuresis, intermittents, hypochondriasis, and palsy, especially those forms of it arising from injury, or affections of the spinal cord, from lead, arsenic, cold, or other external causes. It is contra-indicated in all congested or inflamed states of the nervous centres. To derive the fullest benefit from its action, perhaps the case should be one depending entirely on debility of the muscular or nervous fibre.

DR. ELLIOTSON ON MESMERISM.

To the Editor of the 'Medical Times.'

SIR,—I send you the case which I promised last week, related in a letter to me by a lady whom I have not the pleasure of knowing. Next week I will send you another.—I have the honour, &c.

J. ELLIOTSON.

Conduit Street, June, 11, 1842.

SIR,—Your persevering exertions in establishing the great truths of Mesmerism, so honourable to yourself, and beneficial to mankind, induces me, without apology, to trouble you with the following statement:—

Thursday, the 12th ult., George Hayes, an old servant of my mother's, fell from a ladder eight feet high, and was so severely injured we feared he could not survive. Mr. Coles was in attendance in about twenty minutes, and found him suffering most violent pain from a wound on his head, and severe contusions of the left arm, leg, and lower part of the back. Mr. C. said, though no bones were broken, he was severely injured, and that he could not then venture to bleed him, but would return in the evening. I asked if he would allow me to *Mesmerise* George, to which he *gladly*

assented. I was so much agitated from seeing the pain, and hearing the groans of agony uttered by the poor patient, that I feared I should have little power. However, I prayed earnestly for Divine assistance, in which he joined me, and commenced mesmerising the injured parts about half-past twelve. The left arm was quite powerless, and supported on pillows; and you may imagine my astonishment, when, after operating about twenty minutes, he raised the arm above his head, started up in bed, and assured me all pain had subsided—that he felt the use of his limbs restored, and could *that moment* rise without assistance, and called upon the gardener to bear witness to what Mesmerism had done for him.

Now, Sir, I did fear all this must be the result of delirium, for I anticipated no material benefit until sleep was induced. I therefore desired him to compose himself, and aid my endeavours to procure this result, which I effected in about a quarter of an hour. At four o'clock Mr. Coles returned, and found him in a profound sleep, which sleep, he said, *whatever* it was, would do more for him than any medicine, and desired me to let him sleep until the next day. At five o'clock, however, he awoke in great pain, having only slept four hours, when I again mesmerised him, and in a few minutes *subdued all pain*, and put him to sleep; but during this sleep he several times groaned, and even screamed aloud, but a few passes restored him to quiet. I left him at nine o'clock to attend a party at Mrs. Smyth's, of Gaybook, a friend of the late Mr. Chenevix, hoping to gain further instructions from her, for the management of *my patient*, desiring to be sent for if he awoke, which he did soon after I left home; and on my return, about a quarter before ten o'clock, I found him in great pain, and impressed with an idea that he could not recover. I was not much surprised, when, after a quarter of an hour's mesmerising, he told me all pain was gone, and a few minutes more threw him into a profound sleep, which lasted until six o'clock the next morning, when he awoke *perfectly free from pain*, of which he has had no return, having slept seventeen hours, with only the two short intervals I have mentioned. During these seventeen hours, he only heard the clock strike once, and it stands exactly at his head. When Mr. Coles came on Friday morning and found him free from pain and fever, and with an excellent pulse, he told me I had convinced him more of the truth of Mesmerism than all he had heard and seen of it. On Saturday morning I put George to sleep before Mr. C. came, *pretending* I only wanted to mesmerise his back, which was bruised. I was in the garden, and on my return found Mr. C. trying in vain to rouse him. I said if it was *right mesmeric sleep* I only could wake him; which Mr. C. prevented my doing, and pushed his hand to try if he felt it, but he "gave no sign." I then held up his arm and mesmerised it; and on my leaving hold of, there it remained. Mr. C. avowed himself convinced. George got up and walked in the garden quite well, and on Sunday morning he waited as usual at breakfast, but complained of headache; this I removed with a few passes, when another marvel was developed, namely, that a speck on his eye, of fourteen years' standing, was removed; this he was led to imagine might be the ease from his improved sight. He says, that once when I was mesmerising, he felt as if a needle was darted through his eye towards the temple. I questioned him closely as to his sensations, which he describes as beginning with a tingling through his frame, succeeded by warmth, and a feeling of repose, and that *through the bed-clothes* he felt like a stream of cold air wherever my hand passed in mesmerising; he soon became drowsy, and was often sensible to what was passing around him, though quite unable to speak, move, or open his eyes.

Mr. Coles has behaved in the most candid and honourable manner, bearing his testimony publicly to the reality of our servant's cure by Mesmerism. My mother and three of our servants can add their testimony, though the latter, I believe, imagine the whole to be the effect of satanic agency, which is the *enlightened* idea adopted by our clergy, on the authority of Dr. Barron, and the Rev. Hugh M'Neil, who professes

to have derived all his knowledge of the subject from *Chambers's Journal*.

It gives me great pleasure to add, that the cure effected on our servant has gone far towards convincing many well-meaning people of the lawfulness of Mesmerism, who, by misrepresentation, have been led *only* to consider it as a means of prying into futurity and working miracles, and indeed the generality are so ignorant on the subject, that they are surprised to find it can be turned to the alleviation of human suffering. About a year ago, I first became convinced of the truth of this wonderful power from Mrs. Smyth, and her daughter, Mrs. Bond, who had learned its practical use from their friend Mr. Chenevix, and by it had effected numberless cures, many of which he published, and are quite as extraordinary as any related by Colquhoun, Dupotet, or Townshend.

I should have mentioned, that George Hayes had been twice mesmerised by Mr. Wilson, the phrenologist, for a pain in his arm of nine years' standing, and though Mr. Wilson could not put him to sleep, he rendered him cataleptic, and restored the use of his arm, so that he could hold a heavy tea-tray above his head, which neither Dr. Ashworth nor Mr. Wilson could do. To George's faith in mesmerism from this fact I attribute my being able to act so strongly upon him. He tells me he sometimes dreamed during his sleep.

Mr. Coles deserves great credit for acting as he has done, as his partner Mr. Murley is violently opposed to Mesmerism.—I remain, Sir, with high respect for your talents, yours, &c.,

ELIZA WALLACE.

The Aviary, Cheltenham, May 24, 1812.

P.S.—Since writing the above, I have been exceedingly surprised by Mr. Coles telling me, that he had inserted George's case in the 'Medical Gazette' of the 20th ult., which I have seen, and find there are slight differences in our statements; the only material one is, that the warm lotions were not applied until ten o'clock at night. I have this evening heard of another most remarkable cure performed here, by this wonderful agency; and if you, Sir, would like to have it, I think I can have it sent to you.

At the time Mr. Coles sent his report to the 'Medical Gazette,' he did not know of the speck on George's eye being gone.

ERRATA.—In Dr. Elliotson's communication, in our last number, the reader is requested to correct with his pen the following typographical errors:—Page 165, at the head of col. 2, for—'Believe for the word's sake,' read, 'Believe for the *work's* sake.' Col. 3, about centre line, for 'Wakley's,' read, 'Wakleys.' P. 166, col. 1, six lines from the end of communication, for '*her* intelligence,' read '*high* intelligence.' P. 168, col. 3, line 15, for '*his* obligations,' read '*its* obligations.'

To Dr. Elliotson.

DISEASES OF MENSTRUATION.

By T. W. B. KIRKBY, M.R.C.S.L.

CHLOROSIS.

Chlorosis, or green sickness, so called from the peculiar colour of the skin, usually indicative of the malady, has been classed by some writers as a variety of amenorrhœa, and by others treated as a separate disease. Although the non-appearance of the catamenia at the age of puberty, irregularity in their appearance, or suppression of the discharge, at any period from its first establishment, most frequently accompany chlorosis, the disease may be developed independent of these, and may even occasionally occur in males, as witnessed by Mackintosh, Copland, Marshall Hall, and other authors.

Symptoms.—The stages of this disease are two—the *incipient* and *confirmed*. The incipient stage commences insidiously and imperceptibly. The patient is listless, languid, weak, repugnant to exercise or exertion; the mental powers are incapable of attentive application, the face becomes pale, the stomach is disordered,

there is disinclination for food, and sometimes depraved appetite; the bowels are constipated, respiration is short and hurried, and the breath offensive; palpitation of the heart; the lips are pale and bloodless, the tongue is pale, broad, and loaded, and its edges indented by pressure against the teeth; the pulse is weak, small and quick; the face and eyelids become tumid and puffy. Sometimes there is pain in the head, left breast, or back; pain and swelling of the abdomen, stimulating peritonitis; the catamenia may not have appeared, or be pale and scanty in colour. Sleep is disturbed; the extremities are cold, and the skin is sallow, and covered with a greasy moisture.

In the second, or confirmed stage, all the above symptoms become aggravated. The pale, greenish yellow complexion is now strongly marked; the lips, cheeks, and gums, are exanguinous and tumid; the tongue is clean, smooth, and fissured; the dyspeptic symptoms are increased; occasionally there is constant nausea and vomiting, with flatulency, and swelling of the abdomen after meals; œdematous swelling of the ankles; emaciation and wasting of flesh; the skin expels a cold moist clammy perspiration; the bowels become relaxed; the respirations are short and frequent, attended with cough and expectoration, and the patient sinks.

Causes.—Chlorosis is most common in females at the age of puberty. Sedentary habits, confinement in closely-heated rooms, violent emotions of the mind, particularly such as cause much depression, imprudent and unrequited attachments, solitary employment, &c. &c., are the most common predisposing causes of the disease.

Dr. Marshall Hall observes, that in some manufacturing districts chlorosis, and some affections strictly allied to it, may, from the habits of the people, be justly said to be endemic. In manufacturing towns, in Nottingham, for instance, the youthful and almost the infantine parts of the population are engaged, during many hours of the day, bending over the tambour, or lace frame. The baneful influence of the want of air and exercise, and of a sedentary occupation, are speedily visible in the pallid and icterode states of the complexion, and in the listless manner of these youthful sufferers. The bowels first become confined and loaded; the appetite repels simple food; the breath becomes tainted; the gums become swollen and pale, and the teeth decayed. This state is gradually followed by other appearances, and affections observed in chlorosis.

Diagnosis.—The history of the case, if carefully entered into, will generally be sufficient to distinguish the disease. We must be cautious in not allowing ourselves to be deceived by the violent pains that sometimes occur, and mistake these for attacks of inflammation of various organs, as the liver, brain, &c., which has been sometimes done; a due and cautious attention to the whole of the concomitant symptoms will prevent our being led into this error.

Prognosis.—Chlorosis, in the first stage, is generally cured by a judicious course of treatment, if unattended with organic disease of the viscera. In the more complicated forms, and when the disease has long existed, and is attended with emaciation, cough, expectoration, œdematous swelling of the ankles, and other signs of great debility, a more doubtful opinion must be entertained.

Pathology.—The blood is altered in character during chlorosis; there is diminished quantity of crassamentum, with a proportional increase in the serum: on this depends, most probably, the peculiar pallid appearance exhibited by chlorotic patients; it has also been proved that there is a deficiency of iron in this fluid.

Treatment.—In treating chlorosis, our first object should be to endeavour to get the viscera into a more healthy state of action, and this will be best done by mild aperients. The compounds of aloes, as the decoct. aloes comp.; pil. aloes comp.; pil. aloes c. myrrha; will all be found desirable remedies for this purpose; or a few grains of the blue pill at bed-time, followed by a draught with the decoct. aloes comp., in the morning. Dr. Ashwell also recommends the injection of a pint of warm water two or three times a-week into the rectum, as being most efficacious in promoting the peristaltic action, and unloading the large intestines. Violent purging must be avoided. After the full evacuation of the bowels, any of the preparations of iron, as the ferri sulphas, ferri ammonias, ferri carbonas, the mist. ferri comp. ferri iodid., may be prescribed, as being valuable remedies in chlorosis. We have found the following formulæ of great benefit:—

R. Ferri sulphatis, gr. xxiv.;
Quinæ disulphatis, gr. xij.;
Extr. gentianæ, qss.

M. Ft. pilulæ, xij.; cap. j. vel ij., ter die.
Or—

R. Quinæ disulphatis, gr. xij.;
Ferri sulphatis, gr. xxiv.;
Pulv. opii, gr. iij.;
Extr. gentian, qss.

M. Ft. pilulæ, xij.; cap j. vel ij., ter die.

Dr. M. Hall recommends, after the evacuation of the bowels, pills consisting of two grains of the Barbadoes aloes, and the same quantity of the sulphate of iron, taken daily during dinner, as most efficacious; indeed, he has found them almost specific. Dr. Copland recommends the following should be taken either during, or after dinner:—

R. Aloes, socot.;
Ferri sulphatis, aa., gr. ij.;
Gum mastick, gr. j.;
Pulv. capsici, gr. ij.;
Syr. simpl.; vel
Olei caryoph, q. s.

M. Ft. pilulæ duæ. Or—

R. Aloes, 3ij;
Assafœtidæ;
Myrrhæ, aa. 3ss.;
Ferri. sulphatis, 3j.;
Caryophyllorum in pulv. 3j.;
Pulv. capsici, gr. xxvj.;
Balsam. Canad., q. s.

M. Ft. pil. lxvi.; quarum capiat, i. vel ij. pro dose.

In addition to the above remedies, warm clothing, regular exercise in the open air, particularly on horseback, nutritious diet with a moderate quantity of wine, must be enforced. Patients suffering under this disease, and residing in large cities, will often more rapidly recover by removal to a country residence, or a visit to the sea-coast. Sea-bathing, when a sufficient reaction to the skin follows, will be also serviceable. The above means are often sufficient to remedy the disease. In the more protracted cases, attended with difficult or scanty menstruation, Dr. Copland recommends the tinct. ferri ammoniati, or the tinct. guiaci ammoniati, and phosphate of iron, in preference to the sulphate of iron. The decoct. aloes comp. as the most suitable aperient. The ammoniacal injection, composed of one drachm of the pure liquor ammoniæ, to a pint of milk, and injected daily into the vagina, is sometimes useful in promoting the catamenial secretion.

"If the menstrual evacuations continue suppressed, and dropsical affections come on, advantage will sometimes accrue from rubbing the loins assiduously every night with either of the following liniments:—

R. Liquoris ammoniæ, 3j.;
Olei olivæ, 3j.

Misce benc, et adde,
Spirit. camphor, 3ij.;
Olei terebinth, 3ij.;
Saponis duri, 3v.

Misce bene.

Olei cajeputi, 3j.;
Olei limonis, 3iss. M.
Liniment saponis comp., liniment camphor comp., aa. 3iss;
Olei terebinth, 3ij.;
Saponis duri, 3ij.;

Olei limonis et ol. cajeputi, 3j. M. Ft. liniment, and acting gently on the bowels by means of the following pills:—

R. Pil. aloes c. myrrh, 3j.;
Saponis castil, 3ss.;
Olei crotonis Tiglii, miiij.;

Contunde bene simul et divide in pilulas, xxiv.

Quarum omni nocte capiat unam, binas, vel tres."*

Dr. Gooch described a form of chlorosis, occurring chiefly in married women, which he termed *acute chlorosis*, but this is now believed to be dependent on large losses of blood, and therefore must be regarded as a state of anæmia.

The following summary of the treatment, adopted by Dr. Ashwell in chlorosis, is copied from the first volume of the Guy's Hospital Reports. I would commence (he says) the treatment by especial attention to the digestive organs and alimentary canal; for I regard these, as a cause, second only to the peculiarity of constitution already mentioned. The deteriorated quality of the blood, and its defective quantity, may both owe their origin to impaired digestion and nutrition. I have alluded to the jaundiced hue of the complexion, and of the surface generally, as frequently leading to the suspicion of hepatic disease. The diagnosis will be made by a careful examination of the region of the liver itself, of the urine and the fæces, which will prevent the possibility of being misled by the colour of the lips and conjunctiva. The best aperients are aloes, rhubarb, the sulphate of soda and manna; and if an alternative be necessary, the hydrargyrum cum creta. Nor must we forget that the injection of a pint of warm water two or three times a-week into the rectum, is of all measures the most efficacious in aiding peristaltic action, and in removing the load off the intestines. The compound decoction of aloes, with the tinct. cardam. C.; the compound aloes pill, with the oil of cassia and hyoseyamus; and the vinum aloes, with the compound tincture of rhubarb, are the forms of these medicines I prescribe. The combination with any purgatives or aperient remedies of mild cordials, is exceedingly important. The following may be advantageously exhibited:—

R. Pulv. rhei, 3ss.;
Magnes. carbon., 3ss.;
Confect. aromat., 3j.;
Aq. cinnam., 3ix.;
Tinct. cardam. co. 3j.;

M. Ft. haust bis ter die in septimanâ sumendus;

R. Sodæ sulphatis, 3iss.;
Pulv. rhei, 3ij.;
Magnes. subcarb.;
Sodæ subcarb. aa., 3ij.;
Pulv. aromatici, 3ss.

M. Ft. pulv. aperiens. Sumat cochl. j. vel ij., parva, bis terve in septimanâ, ex aquâ pura.

So soon as the repugnance to them can be conquered, nutritious animal diet, and mild malt liquor, will be productive of benefit. The improvement of the digestive organs, indicated by return of appetite and the healthier condition of the bowels, evinced by their natural and daily evacuation, are generally accompanied by alteration of the complexion, and by the partial disappearance of the chlorotic hue, rarely by the immediate establishment or return of the catamenial secretion. At this crisis, some of the preparations of iron may be exhibited. The following may be prescribed:—

R. Ferri ammon., 3iss.;
Extr. humuli;

Extr. papaver. alb. aa., gr. xv.;
Ol. cassiæ, m. xv.;

M. Ft. pil. xxiv., sumat. j., vel ij., bis terve quotidie.

Where there is torpor of the system, flatulence, and hysterical depression, a teaspoonful of the annexed mixture, in water, may be swallowed with each of the pills.

Tinct. humuli, Columbæ, vel gentian co., 3iss.;
Tinct. lyttæ, 3j.; spt. ammon. ar., 3ij. M. Ft. mist.

Quinine, sarsaparilla, gentian, and zinc, are remedies of acknowledged power; and in a variety of instances, where the sulphate, or other preparations of iron, appeared injurious, I have given, with decided good effect, the following powder, either once or twice a-day:—

R. Ferri subcarb., gr. viij.;
Pulv. ipecac., gr. j.;
Hydrarg. c. cretâ, gr. ij.;

M. Ft. pulv.

Chalybeate waters are sometimes extraordinarily efficacious. At what time shall emmenagogues be employed? When the health is so far improved that there is less pallor, with regularity of bowels, and more and better blood.

The iodide of iron may be given with undoubted success, especially when glandular enlargements, and other indications of a strumous habit, have been associated with the chlorosis. I give the subjoined form:—

R. Ferri. iodid., gr. xvj.;
Tr. Columbæ, vel
Gentian, co. 3j.;
Aq. distillat. 3vij.;

Ft. mist. sumat, cochl. ij., magna, bis, terve quotidie.

The iodide of iron sometimes occasions headache, vertigo, nausea, heat, and a sensation of weight in the hypogastrium. These symptoms may be removed by taking a teaspoonful of the carbonate of magnesia at night, by the temporary omission of the medicine, or by diminishing the dose.

NITRATE OF SILVER.—Dr. Daniel, of Cetto, describes the case of a Venetian, thirty-two years old, labouring under catarrh of the bladder, complicated with syphilis, impotence, and more or less involuntary discharge of semen every morning. The syphilitic complaint was treated with baths containing the dento-chloride of mercury, and for the affection of the bladder and caput galinaginus he was ordered an injection of 125 scruples of distilled water, in which had been dissolved 32 grains of nitrate of silver. This was injected into the bladder with the best effects. The strength of the solution was gradually increased, and the patient was cured in less than three months of his syphilis, vesical catarrh, and impotence. Dr. Daniel heard afterwards that he had recovered, and that his wife was pregnant.

TO CORRESPONDENTS.

Dr. Clay's remarks on Placental Presentation; Mr. Cotin Mackenzie's paper on Interments; and Mr. Carmichael's letter, in our next.

We have received Mr. Hawke's note, speaking in indignant terms of the low artifice and falsehood of the anonymous correspondent who libelled his character, by classing him in the list of empirics. As we detected and exposed the cheat at the time, we think it well to decline the insertion of the letter. We share Mr. Hawke's feelings, and are happy that he was spared any chagrin, save that of learning that he had an enemy who had the willingness, at least, to do him a wrong if he could.

Z.'s deficiency, though a presumption against the likelihood, is no certain obstacle to the desired result.

Mr. Hale, Professor of Galvanism, addresses us a note asserting his belief in Mesmerism—vouching for its high utility as a medical aid—speaking of its rapid progress, and proposing the formation of a Mesmeric Society, over which he recommends that Dr. Elliotson should be invited to preside. "The object of the society," he says, "are these—to ascertain the truth or falsehood of Mesmerism—to investigate its cause, and learn what constitutions are subject to its influence—to discover how society may be benefited by it in the cure of disease, or as an assistant in surgical operations;—if the society should be satisfied with its utility, to bring forward patients willing to try the experiment, that the faculty may no longer consider it a delusion, but may be induced to practise it themselves, for the benefit of mankind in general."

** * Our Journal may be ordered of any bookseller or newsman, or will be regularly sent by giving a town reference, or transmitting a money enclosure, or Post-Office order, either to Mr. J. Angerstein Carfræ, or to the Editor, Medical Times Office.*

ROYAL COLLEGE OF SURGEONS IN LONDON.—THE SECOND AND CONCLUDING LECTURE on the FOSSIL REMAINS of EXTINCT ANIMALS, will be delivered in the Theatre of the College, by Professor OWEN, F.R.S., on Wednesday, the 6th of July, at Nine o'clock in the Evening. Tickets of Admission will be delivered to Members of the College upon personal or written application to the Secretary at the College.
By Order, EDMUND BELFOUR, Secretary.
June 11, 1842.

ROYAL COLLEGE OF SURGEONS IN LONDON.—THE COUNCIL of the COLLEGE, desirous of furnishing to the Public a correct List of their Members, request that each Member will be pleased to transmit to the Secretary, between the 1st of June and 1st of July in every year, by letter, a Statement containing his name, address, and date of Diploma, in his own handwriting, in order that it may be compared with the Chronological List.

The President and Council, in publishing the Corrected List of the Members of the present year, with the date of each Diploma, regret that so many Members have omitted to make the return requested by the Council.

They are anxious to explain to the Members, that the object of this Annual Registration is to furnish the Judges, Magistrates, Clerks of the Peace, Poor-Law Commissioners, Boards of Guardians, and the Public generally, with a correct List of qualified Surgeons, in order to prevent the various impositions which have been practised upon them by ignorant pretenders and other unqualified persons.

The names of all Members who shall not have registered themselves previously to the month of July 1843, will be omitted in the Corrected List of that year.

The President and Council particularly wish to intimate to all Public Functionaries, that no Diploma can be genuine, in which there is any erasure, interlineation, or other alteration.

N.B. The Corrected List for 1842 may be purchased at the College for One Shilling.
June 11, 1842. EDMUND BELFOUR, Secretary.

THE MEDICAL TIMES.

SATURDAY, JUNE 18, 1842.

— "Arma tenenti
Omnia dat, qui iustis negat."

CÆSAR.

If we have any title to be considered a correct interpreter of the opinions of our medical brethren, we may confidently declare that there are few things to which they feel stronger objection than the practice of regular practitioners playing at once the character of shop-keeping druggists and doctors. They feel that it necessarily interferes with his acquiring that

thorough mastery of either craft which is essential for its useful exercise, while it directly degrades the character, and lowers the standing of that noble profession which is befouled by so humiliating and injurious a partnership.

We have never scrupled to avow that these are opinions in which we heartily sympathize, nor hesitated to give our strongest advocacy to measures which would dissociate employments, which for the interests even of those exercising them, should be kept impassably apart. But if a practice thus bad—and generally condemned—exist, and go on increasing, the fault, we are bound to declare, is not that of medical men—it is the fault, first, of the druggists, who force them into it in mere self-defence; and, secondly, of the bad legislation, which leaves the profession to be carried to and fro by every wind of practice, and made any thing and every thing, as may chance to blow the ignorance or cupidity of those having to deal with it. We know, as matter of common observation, that nine-tenths of the poor mechanical population, look upon the druggists as the men to whom they are to have recourse for the alleviation of all their minor maladies; and it is equally notorious that the druggists have established and encouraged this fatal delusion, by their mock inquiries after their consultants' symptoms, their advices, prescriptions, and visitations. The consequence is inevitable. The thousand real practitioners descend from their profitless elevation, and prefer to live by *doing* the work the druggists *pretend* to do, than starve on a dignified but despised respectability. The druggists must not complain, if that measure be poured into their bosom, full and overflowing, which they first meted out to others; and looking on the question apart from a retaliatory spirit, we feel bound to say, that if the druggist and doctor is to be the same person, the best plan for humanity is, to make, not the druggists doctors, but the doctors druggists. If the latter practice be not the most gentlemanly, it is, at all events, *safe*; and we should prefer—if one of two alternatives must be taken—to see a profession degraded, than to have generations medically murdered.

The evil of druggists' practice is becoming every day more frightful. One daily journal of the last week furnishes us with two druggists' murders in one short column; and, if the bills of mortality could be scanned with a little more attention to the *history* of disease, and the cause of death, in connexion with medical attendance, be better investigated, we should, doubtless, find a druggist's list of dead, in which the two thus given to light would form a small item of the daily average of druggists' victims, the secret of whose hastened deaths is hidden in the same darkness that envelopes their remains. One of these cases, in addition to the interest it possesses, as an illustration of the blessings of druggists' practice,

offers, in one of its incidents, an interest so peculiar to itself, that we give it, without apology for its length:—

A tall decent-looking female, dressed in "widow's weeds," and labouring under deep mental affliction, presented herself before Mr. Norton, at the Lambeth Office, and requested his advice and assistance under the following circumstances:—On the 16th of April last, her husband, who had previously enjoyed the most perfect state of health, was seized with a slight attack of diarrhoea, which continued until Sunday, when it became much abated by his taking some brandy and hot water. On the following day (Monday), however, he had a slight relapse, and by the advice of an acquaintance he went to the *shop of a chemist and druggist* in the neighbourhood, who gave him a large pill, which he was to take immediately on his return home, and a draught, of which he was to have taken two table-spoonsfull every two hours. He took the pill about one o'clock in the afternoon, and so instantaneous was the effect it produced upon him, that he was unable to lift the cup containing the two spoonsfull of the medicine to his lips. He placed his head upon his hand, and exclaimed, "My dear Jane, I am getting very light-headed, and I am afraid I am going to leave you." He instantly fell into a dose, and applicant, thinking that a little sleep would be of service to him, covered his face over, and went out on some business. On her return home she found him still apparently asleep, and allowed him to remain so for some time after; but finding he did not awake in a reasonable time, she removed the covering from his face, and was horror-stricken to find him apparently in a dying state. She instantly gave an alarm, and two medical gentlemen attended, who pronounced him to be beyond all human skill. *One of them also made some insinuations about his not being the first person who had fallen a sacrifice to the medicines supplied by the chemist at whose shop he had procured that taken by him.* On the following Wednesday an inquest was held upon her husband's body before Mr. Baker, the coroner, and a verdict of "Natural death" was returned. After the inquest the body was prepared for interment on the following Sunday, and would have been interred had it not been for what had occurred upon the following Saturday morning. Between two and three o'clock on that morning, while lying in bed with her two children, and while perfectly awake, she heard a voice distinctly exclaim, "Have your husband opened—he is poisoned." This was repeated, and she instantly got out of bed and proceeded into a room adjoining, in which the remains of her husband were deposited in a coffin, and removing the lid and shroud, observed his countenance in the stillness of death. She then examined the doors of both apartments, which she found locked as she had left them on the preceding night, and next the room, but could not discover any one, though the voice evidently proceeded from the bedside, and both her children were at the time fast asleep. The effect which the circumstance had upon her was such that the cold perspiration caused her clothing to be as wet as if they had been soaked in water. On the following morning, about nine o'clock, the undertaker, Mr. Shaw, called upon her to make some arrangements for the funeral on the following day, and on her informing him of the circumstance, he recommended her by all means to have the body opened, and also recommended Mr. Godfrey, as a gentleman of considerable skill, to perform the *post mortem* operation. She in consequence applied to Mr. Godfrey, and that gentleman, with Mr. Monteith, of Charing-cross, opened

the body on the Monday evening following. They divided the contents of the stomach into three parts, which they put into three bottles, and these they sealed up, and left one with her, telling her to take particular care of it, and took away the others. Since that time Mr. Godfrey analysed one of the portions, and declared, as every one must have been prepared to expect, that it contained "morphia or the active principle of opium," and in reply to a question of Mr. Norton, the applicant said that though she had sent for the vendor of the pills, who she believed had caused her husband's death, he had not come near her, and this circumstance, she added, had incurred her suspicion that her husband had been poisoned.

Our history of the details of this case extend, for the present, no further; but we cannot dismiss it, without expressing our anxious hope that the man whose ignorant temerity thus robbed a fellow-creature of life, and threw a wife and young family, disconsolate and miserable, on a homeless world, will not be allowed to escape unpunished.

Our next case is shorter: the tragedy, however, is similar, and quite as complete:

An inquest was concluded yesterday by Mr. Wakley, M.P., on the body of the infant child of Mrs. Sarah Read, residing at No. 17, Grenville-street, Clarendon-square, aged five days. By the evidence, it appeared that on Saturday evening, the child being restless, the mother sent a boy, nine years of age, to the shop of Mr. Evans, a surgeon, in Clarendon-square, for a pennyworth of Godfrey's Cordial. Mr. Evans having none by him, made some up, the ingredients of which consisted of one drachm of syrup of buckthorn, one drachm of water, and one drop of tincture of opium. Half a teaspoonful was given to the child, who shortly after fell into a state of collapse, never rallied, and died the following morning. A *post-mortem* examination was made by Mr. James, the surgeon who had attended at its birth, and the cause of death was found to arise from the action of a strong narcotic poison. Mr. James took possession of the bottle containing the fluid, and it was submitted to the test of analysis, by Mr. Barnes, lecturer on Medical Jurisprudence. Mr. Evans stated that he was positive not more than one drop of opium was put into the bottle; but from the result of the analysis the drug was found to contain 1-10th part of a grain of morphia, which is equal to one grain of opium. It remained a mystery how so much of that narcotic could have found its way into the bottle, Mr. Evans stating so positively that he only put one drop of landanum into it. After a most searching investigation, the room being cleared of strangers, the jury, on deliberating for half an hour, returned the following verdict:—"That the child's death was caused by an overdose of landanum administered by its mother, but how so much got into the bottle there is no evidence to show."

Of course there was no evidence to show—Mr. Evans alone could tell; and he was not likely to own that his malpractice had killed the child. Really, if these practices are persisted in, we shall incline to adopt the conclusion, already entertained by many, either that doctors must be the druggists, or else, as in Germany, that no druggist can be permitted to dispense a grain of medicine, for which he has not a prescription from a qualified medical man. No half measures will remedy the evil.

LECTURES ON THE ANATOMY AND PHYSIOLOGY OF THE NERVOUS SYSTEM.

By Professor OWEN, F.R.S., &c.

THERE is an extensive class of animals, which, from the simplicity of their structure, especially from the entire absence of respiratory organs, rank in the lowest division, almost all the species of which are parasitic in the interior of higher animals: these are the Entozoa. Their peculiar locality and sphere of life expose them to no changes of temperature, or of the surrounding medium. They need possess, therefore, but little impressibility or sensation, and have as little call for the exercise of the locomotive faculty; yet even in the lowest species of entozoa, as the suetorial worms, it must be supposed that impressions are received by the attached head, and may be transmitted and produce actions in other parts of the body. The authentic records, however, of distinct nervous filaments in the parenchymatous worms, which have no distinct alimentary canal, no distinct intestine or abdominal cavity, are extremely few. Bajanus has described and figured nerves in a species of *amphistoma*. A transverse nervous chord at the anterior part of the body is connected on each side, according to him, with a distinct ganglion; filaments radiate forwards towards the single sucker, and a nervous chord is extended backwards along each side of the body.

In this dissection of the great *distoma clavatum*, you will perceive a slender nerve encircling the base of the anterior sucker, the filaments to which are given off from the under part, not from the sides of the nervous cincture. No ganglions are developed upon this central part of the nervous system; but a slender filament may be traced from each side, extending a certain distance along the body, and lost in its fibrous tissue. In the higher or cavitary divisions of the entozoa, the nervous filaments are more distinctly perceptible, and here only have I been able to detect distinct ganglia. In the *Ascaris* a nervous cincture surrounds both extremities of the alimentary canal; these are connected together by two slender chords, one extending along the middle of the dorsal, the other along the middle of the ventral surface of the body. The terminal circles and connecting chords are well seen in the great *Strongylus*, in which the ventral chord obviously predominates in size.

In this preparation of the *Linguatula tenioides*, a conspicuous ganglion is situated beneath the pharynx. It sends a slender filament around that tube, and larger branches to the four uncinated suckers, and two large parallel nervous chords, are continued from the posterior part of the sub-oesophageal ganglion along the ventral surface of the body, at some distance from each other, to near the anal extremity. This simple, but obvious condition of the nervous system, may be compared with that of the embryo chick the third day of development: the position of the oesophageal enlargement, and of the parallel chords, being reversed in relation to the alimentary canal.

The foregoing conditions of the nervous system, like the varied forms of the body, conduct by almost imperceptible transitions from the radiated to the articulated types; but before proceeding to consider the nervous system of the Annelida, which are the lowest organised of the Articulata, its modifications must first be noticed as they are manifested in the rotiferous or higher division of the Infusoria. In several genera of rotifera, as in the *Hydatina*, Ehrenberg has detected and described, and figured with his usual accuracy, the nervous system. Besides the ganglionic mass con-

nected with the coloured eye-speck in these genera, he finds one or more additional ganglions, unconnected by a nervous chord, surrounding the oesophagus, and sending, as in the *Linguatula*, two long parallel, but unconnected chords, along the sides of the under part of the body. In the Notozomata, small supplementary ganglions would seem to be developed upon these nervous chords of the trunk.

In the red-blooded worms, the principal nervous chords are brought into apposition along the middle of the ventral surface of the body, and are usually connected together by ganglions corresponding with the number of segments into which the body is divided. In the diminutive *Nais* such enlargements are, however, not perceptible, except in the upper and lower parts of the oesophageal circle; the simple abdominal chords are nearly transparent; the only enlargements I have detected in them have occurred at those parts at which the body has been subsequently spontaneously divided, and they indicate the preliminary accumulation of the nervous matter at those parts corresponding with the increased number and size of the vascular ramifications, and constitute, when the fission is completed, the oesophageal ganglions of the newly generated individual.

In the *planaria*, which connect the annelides with the trematodæ, a distinctly developed nervous system is plainly indicated by the ocelli, which are developed sometimes in great numbers upon the anterior marginal of their parenchymatous body. The leech, too, has its eye-specks, ten in number, upon the upper lip, and the nerves supplying these have been traced by Brandt to a supra-oesophageal ganglion; this is connected by the usual nervous collar, with a sub-oesophageal ganglion. Two chords, in such close contact as to appear single, are continued along the middle of the whole length of the under part of the body, upon which are developed (four-and-twenty) equidistant, lozenge-shaped ganglia, the microscopic structure of which has been described and figured by Ehrenberg and Valentin. The articulated indications of the segments of the body are much more numerous than the ganglions. Brandt has detected a single and simple filament continued from the oesophageal ganglion into the dorsal aspect of the alimentary canal. This is the first trace of the viscerol or stomatogastric system of nerves. In the earth-worm the supra-oesophageal ganglion consists of lateral lobes, which send off their small nerves to the mouth, and two large chords around the oesophageal ganglion. The muscular part of the mouth derives nerves from these oesophageal chords. The abdominal nervous trunks are continued in the usual way from the sub-oesophageal ganglion. The ganglionic enlargements developed upon them correspond in number with the other divisions of the segments. These ganglions are relatively smaller than in the leech, but the two columns are more distinct; one pair of nerves is sent off from each side of each ganglion, and a single nerve from the intervening chord. The anal ganglion distributes a plexus of nerves to that termination of the body. In the aphrodita the body is broader and thicker, the general structure more complicated, and soft antennæ or distinct organs of sensation are developed from the head. The nervous system accordingly exhibits a greater degree of concentration in its central part, and especially in the greater regularity, size, and importance of the supra-oesophageal ganglion. This is heart-shaped, having its bilobed base turned backwards, and connected in the usual manner by large oesophageal columns with the inferior ganglion. The antennal nerves are continued from the apex. The visceral nerves are given off

from the œsophageal circle, and pass to the upper surface of the intestine, and there swell into a small ganglion. The sub-œsophageal ganglion, is of large size, and is bifurcate anteriorly. The second ganglion is situated close by the first, and gives off two pair of nerves. The third to the fifteenth ganglions send off respectively three pairs of nerves, the first of which corresponds with the intra-ganglionic nerve in the earth-worm, and supplies the branchial organs. The second pair is distributed to the ventral muscles—the third to the lateral and dorsal muscles. The œsophageal ganglions which succeed the fifteenth, send off each two pairs of nerves, and gradually diminish and approximate at the posterior extremity of the body. The nervous system in the earth-worm and *aphrodite*, was displayed in preparations by Hunter. The nerves of the gigantic *Nereis*, leodice, correspond with those of the *aphrodite*. The ganglions are more distinctly double or bilobed, and correspond in number with the segments of the body; and in one individual which was exhibited, which exceeded ten feet in length, the nervous system presented upwards of 2000 ganglia. This complication is, however, more apparent than real, depending upon the principle of repetition of similar parts which characterizes all the lowest forms of organization. It is illustrated by the multiplied hearts in the earth-worm and other annelides, by the multiple ovaries and testicles in the *tæneæ*, by the repetition of the stomach in the *polygastria*, by the multiplicity of the respiratory organs in the leaves of the tree, and to the same principle belongs this repetition of the nervous centres in the elongated *nereis*.

There is a remarkable class of animals deprived of the power of locomotion in their mature state, when they are protected by a multivalve calcareous shell, combining this with distinctly articulated organs, and essentially connected with the articulated division of animals, by the condition of their nervous system: these are the *cirripedia*, or barnacles. In a dissection made by Mr. Goadby, was exhibited the simple œsophageal nervous collar, and the two parallel abdominal nervous chords and ganglions as described by Cuvier. The dark colour of the neuralemma renders these conspicuous at the base of the jointed and ciliated appendages.

PROFESSIONAL ETIQUETTE.

To the Editor of the 'Medical Times.'

SIR,—In your publication of the 26th April I have been shown a letter from Dr. Barnes, of Carlisle, in which he endeavours to contradict a statement put forth by me in the *Lancet* of the 16th April ult., relative to his unprofessional and ungentlemanly conduct in the case of a patient belonging to the Carlisle Dispensary. Were it in any way consistent with a decent regard for the respectability of the profession, before whom I laid the accusation, I might content myself with simply denying the correctness of his statement, as he has attempted to deny that of mine, and thus leave the question to be decided by the weight of our respective claims to credibility. But, with the exception of his denial of the answer alluded to—I mean that in which he declared *professional etiquette to be all humbug*, and which I can only meet by re-asserting the fact of his having given it, and by appealing to the testimony of Mr. Daere, who was present at the time—I have little or nothing to refute, as Dr. Barnes's own statement, in a great measure, bears out the charge I have preferred against him. If he means to assert, however, that the

boy was his patient alone, and that the business of any other person with the case was entirely subordinate to his direction, I must take leave to meet the affirmative by the most emphatic denial. After Mr. Daere and I had attended the patient for several days, Dr. Barnes was requested by us to visit him; and whilst we continued our attendance on the case, until Mr. Reeves's unwarrantable conduct induced us to relinquish the care of it to him, Dr. Barnes saw the patient *but once*. How far he may be able to make it appear that the circumstance of a single visit to a patient labouring under dangerous inflammatory symptoms, can give him an exclusive right to call the case *his own*, whilst the care, attention, and responsibility devolved upon others, it may be difficult to conjecture, unless, indeed, he can induce other parties to entertain the belief, that through the medium of some peculiar mesmeric influence, operating on the other officers, and emanating from himself, the whole of the duties of the institution are actually performed by Dr. Barnes. If he fail to maintain his claims to this extraordinary faculty, he must stand self-convicted of negligence; for he certainly did not attend this patient in such a manner as to make it appear that he held himself responsible for his proper treatment, notwithstanding that he now asserts that the patient was his own.

It would be unbecoming in me to offer any advice to the committee, or otherwise to interfere with their business; but I cannot imagine how they can overlook such a flagrant dereliction of duty, unless they believe in something very like witchcraft, and place implicit confidence in the sorcery of Dr. Barnes. By his attention to their duties, it is possible, however, that they may consider him compensating for the neglect of his own. It is really very difficult to understand their arrangements. Had I actually committed any breach of discipline or of duty, I should have supposed the committee were the parties to whom I would have been accountable; that it was within their province to decide any charge to that effect, and to acquit, reprove, or dismiss me, as the proofs would appear to justify them in doing. But Dr. Barnes "*felt it his duty to reprimand me!*" and with the facts before him which I have already stated, some notion may be formed of the delicate discrimination by which he arrived at such a conclusion. I need scarcely add, that his manner of executing the "*duty*" was perfectly in keeping with the judgment which induced him to undertake it. It appears, too, from his letter, that he "*also felt it his duty*" to justify Mr. Reeves; but when, or where, or under what circumstances he did this, I cannot learn. Before the committee, I know, he was most discreetly silent, where Mr. Reeves underwent a very severe rebuke for his conduct in this matter; and yet this was subsequent to the time when his *sense of duty* induced him to *reprimand* me in the good set terms I formerly stated.

I have no hesitation in using this language when speaking of conduct so reprehensible as Dr. Barnes's has been in this affair. He may flinch as he will from the charge I have brought against him, but he cannot avoid it. He may attempt to deny it again, but he knows it to be true.—I am, Sir, very faithfully yours,

WILLIAM BOYD, M.R.C.S.

Newcastle-upon-Tyne, June 10th, 1842.

P.S.—It may not be amiss to point out the magisterial complaisance with which Dr. Barnes expresses his approbation of Mr. Reeves's treatment of the case, as if that were a matter in question. He does not venture, however, to disapprove of what was recommended by us.

SIR,—My attention being called to a letter in the "*Medical Times*" of April 26th, signed "Thomas Barnes," I immediately forwarded a copy of it to Mr. Boyd, whose reply to it has been submitted to my approval; and I beg leave to confirm both the original statements, as given in the *Lancet* of the 15th April (which Dr. Barnes has thought fit to contradict in his usual well known style) and Mr. Boyd's present letter, in every particular. There being some allusion, however, in Dr. Barnes's letter, applying more particularly to myself, I feel it a duty incumbent on me, in justification of my own conduct, to lay the following statement of undeniable facts before the profession:—

Early in January, Mr. Reeves, the then paid medical officer of the Dispensary, being seriously indisposed, wished me, as a personal favour, to undertake his duties. I consented, and acted for him from January till the time I received the thanks of the governors at their annual meeting, held on the 1st of March. At this meeting Mr. Reeves was appointed one of the honorary medical officers, Mr. Boyd having been elected Apothecary, in his place, a few days previously. On Mr. Boyd's arrival in Carlisle, he being a stranger, Mr. Reeves' health not fully re-established, and in order that the duties might be fully discharged, I continued my services.

The patient alluded to in Dr. Barnes's letters was a boy of the name of Lennox, whom I first visited on the 1st of March. Mr. Boyd and I subsequently attended him till the 5th, when the boy having become much worse, we called upon Mr. Reeves to visit him. Mr. Reeves being absent, we applied to Dr. Barnes, who went and saw him. (Here it ought to be borne in mind that the patient was labouring under a very dangerous inflammatory attack, and yet this most benevolent physician, now, for the first time, having claimed the patient for his own, and under his especial care, never visited him till we discontinued our attendance, when all dangerous symptoms had disappeared.)

Could such attendance entitle Dr. Barnes to call this patient his own? Was this not extraordinary conduct for a physician extraordinary? On the 6th Mr. Reeves countermanded the prescription which Mr. Boyd and I had given, telling the mother of the boy that it was improper; therefore the first act of Mr. Reeves, after he had been exalted to the dignity of a surgeon to the Dispensary, was to repudiate the directions of Mr. Boyd and myself, and amongst the members of the profession basely injure me, who, for upwards of two months, in the most inclement period of the year, served him as a friend!! In consequence of Mr. Reeves's conduct, I addressed the following to him:—

(COPY.)

SIR,—The treatment recommended by me for the boy Lennox, having been disapproved by you, I beg to decline visiting him again; upon you, now, rests the whole responsibility of the case.—Your obedient servant.

Warwick-road.

The following morning I found Mr. Reeves from home, and Dr. James attending at the Dispensary for him. We requested Dr. James, in Mr. Reeves's absence, to visit the patient; he declined interfering with the case. We afterwards called upon Dr. Barnes—and it was then he used the *elegant* expression—"Medical etiquette all humbug! pooh! pooh! nonsense!"

When Mr. Reeves came to the Dispensary, I, as a matter of course, asked him for an apology for his unprofessional interference; this he refused to give me. He then went for Dr. Barnes, who came to the Dispensary, and attacked Mr. Boyd and myself in the most violent and excited manner; and in language

which no gentleman could possibly have used. Now, I ask, what right had Dr. B. to insult me? I was not a "menial of an establishment." I was giving my services; and if I *had* committed an error, it was to the Quarterly Committee of Governors I was amenable for my conduct. Shortly afterwards, a meeting of the Committee took place, when I laid a plain statement of the facts before them. Mr. Reeves was severely reprimanded for his conduct, but not a word of disapprobation even whispered against Dr. Barnes, whose conduct was much more deserving of their reprobation. In consequence of which, I felt it *my duty*, as a man of honour, and, I trust, bearing the character of a gentleman, to send the following note to Dr. Barnes:—

(COPY.)

SIR,—Having explained my conduct to the satisfaction of the Quarterly Committee, you were present, and had not the gentlemanly feeling to acknowledge your error. I now demand an apology for the ungentlemanly observations applied to me at the Dispensary on Monday, in the presence of Mr. Reeves and Mr. Boyd.—Your obedient servant,

C. W. DEANE.

Warwick, Wednesday Evening, March 9.
To Charles Barnes, Esq., M.D.

This Dr. Barnes retained, (not unopened,) in another envelope, without note or comment. I then consulted a friend, who advised me to take no further notice of the matter, as it was quite evident from his conduct that no satisfaction could be expected from an individual who had thereby forfeited every claim to the character of a gentleman.

I have now finished my statement; Mr. Reeves's conduct I can only look upon with contempt. But surely the "Physician of a quarter of a century" might have been expected to *know*, if he did not *feel*, what was due from one gentleman to another; and out of respect to that profession of which he is a member, to assume a deportment which appears foreign alike to his feelings and his nature. To that profession I submit the facts I have stated; and remain, Sir, your obedient servant,

C. W. DEANE.

Carlisle, June 6, 1842.

PHARMACEUTICAL NOTICES.

On the Conversion of Benzoic Acid into Hippuric Acid in the Human Subject. By Alexander Ure, M.D., A.M.—In a paper of mine published in the Medico-Chirurgical Transactions for last year, it was stated, that when benzoic acid or a benzoic salt is administered internally, hippuric acid is formed, and may be discovered in the urine. It was moreover suggested, that the therapeutic application of the above fact might prove beneficial in the treatment of certain forms of gravel and disordered conditions of the renal secretion connected with a gouty habit. No reference is made as to the extension of the application to calculus when once formed, neither was anything specific affirmed as to the precise forms of gravel in which its employment might be admissible. The latter point, indeed, was reserved for subsequent investigation.

In a report of a commission of the Institute of France, drawn up by M. M. Gay Lussac and Pelouze, and inserted in the Comptes Rendus for March 1842, upon some researches of Mons. Leroy d'Etiolles, relative to the solution of stone in the bladder, the circumstance of the conversion of benzoic acid into hippuric acid is indirectly called in question. These gentlemen state, "that they were anxious to verify the exactness of the assertion, but the results to which they arrived were negative. They could not find in the urine the most minute quantity of hippuric acid. Several times they observed that the urine in these cases presented an agreeable alcoholic odour, in which no person could recognise the characteristic smell of that secretion.

It offered, besides, this peculiarity, that it might be preserved for several days, without undergoing any apparent alteration."

Not being disposed to enter into any controversy upon the matter, I simply subjoin the following extract from a paper on this subject, read by M. Garrod before the Chemical Society of London, upon the 18th of January last, and since printed in Part II. of their Memoirs: "I have repeatedly performed Dr. Alex. Ure's experiment, swallowing from a scruple to half-a-drachm of benzoic acid at a time, and have always obtained a copious crop of crystals of hippuric acid, amounting to from fifteen to twenty-nine grains, by the addition of hydrochloric acid to the urine passed about three or four hours afterwards (evaporated or not, according to its state of dilution). These crystals possessed all the characters of hippuric acid, with the crystalline form, the small solubility in cold water and æther, the ready solubility in alcohol, the evolution of nitrogen, and also the odour of the Tonquin bean, when heated to destruction; and my experiments therefore so far confirm Dr. A. Ure's fundamental observation."

It may be added, that the peculiar agreeable odour to which MM. Gay Lussac and Pelouze refer, may be generally perceived in urine containing hippuric acid; and the fact of the urine remaining for days unchanged is a further indication of its presence. A portion of horse's urine, sent me by Mr. Field, the eminent veterinary surgeon, in the beginning of the month of February, and which contained a notable quantity of hippuric acid, remains perfectly untainted up to this date (20th May).

M. Garrod, in the above paper, mentions his having always been able to obtain a distinct trace of uric acid from human urine containing hippuric acid. The following are his results:—"From 4½ oz. of urine, when no benzoic acid had been taken, uric acid 1.07 grain. From 4½ oz. of urine, after taking 30 grains of benzoic acid, uric acid 0.96 grain. Difference in favour of first, 0.11 grain." That uric acid might be elicited from urine under such circumstances, was, I believe, first shown by Mons. Bouchardat, in a work edited by him, which appeared at the beginning of the present year (*Annuaire de Therapeutique*, pour 1842, p. 210). He informs us, however, that in the case in which benzoic acid had been tried, namely, that of a patient in the Hotel Dieu of Paris, labouring under acute rheumatism, and whose urine was depositing abundance of uric acid, "les urines ont cessé de déposer spontanément de l'acide urique." Now this cessation of spontaneous deposition is a thing of paramount importance in a medical point of view, and one upon which Mons. Bouchardat very properly lays considerable stress. In an instance when I lately administered a benzoic salt, no uric acid separated from the urine, even after it had been kept for several days.

Balsamic stimulants usually tend to provoke an increased secretion of uric acid from the kidneys. Is it not remarkable, then, that in the experiment above cited, where no less than thirty grains of benzoic acid had been swallowed, a fraction of a grain only of uric acid could be eliminated from the urine after a rigorous process of chemical research, more especially when we take into account that even alkaline remedies, upon which the chief reliance has been heretofore placed for counteracting the so-called uric diathesis, are said not unfrequently to augment the very deposition? Mons. Prunelle, head physician at the waters of Vichy, has seen patients who passed considerable quantities of uric acid gravel almost immediately after taking the waters. Mons. Civiale, unquestionably a great authority on this subject, tells us, in speaking of these highly carbonated alkaline waters: "Ces mêmes eaux ont produit, sur les voies urinaires des effets contraires à ceux qu'on attendait, c'est à-dire qu'au lieu de calmer l'irritation, de rendre l'émission de l'urine plus facile et de dégager la région rénale, elles ont fait sortir plus de sable rouge qu'auparavant, rendu la sortie de l'urine plus pénible, et accru la gêne et l'embarras dans les lombes." (*Du Traitement Médical et Préventif de la Pierre et de la Gravelle*. Paris, 1840, p. 89.)

If, therefore, I should abandon the hypothetical view, which I had, from analogy, been led to assume, with regard to the generation of hippuric acid, I am by no means yet prepared to adopt the theory advanced by M. Garrod, however plausible that theory may at first sight appear. It sets forth that hippuric acid is formed in virtue of the benzoic acid merely taking up the lactate of urea, and throwing off water. "Upon comparing the formulae for hippuric acid," observes the author, at page 3 of the paper already quoted, "benzoic acid, and the lactate of urea, it appeared that one equivalent of lactate of urea minus three eqs. of water, gave exactly the requisite elements for the conversion of 2 eqs. of benzoic acid into 2 eqs. of hippuric acid. 2 eqs. of benzoic acid + 1 eq. of lactate of urea = 2 eqs of hippuric acid + 3 eqs. of water.

Hippuric acid (anhydrous) . . C₁₈H₈O₅N₁
Benzoic acid (do.) . . C₁₄H₅O₃

Difference C₄H₃O₂N₁
Twice the difference . . . C₈H₆O₄N₂
Lactic acid C₆H₅O₃
Urea C₂H₄O₂N₂

Lactate of urea C₈H₇O₇N₂
Lactate of urea . . 3 H O = C₈H₆O₄N₂"

But to meet M. Garrod on his own ground, I think the following experiment will decide the matter. On the 20th of April last, one hour after breakfast, I swallowed a scruple of cinnamic acid, procured by Mr. Bell, of Oxford-street, from the decomposition of cinnamon water. In the course of three hours afterwards I collected the urine voided, and which amounted to about 4½ oz. It was of a pale hue, and of a specific gravity of 1.024. A portion of this urine being allowed to evaporate spontaneously upon a slip of glass, and a drop of muriatic acid added, minute acicular crystals, radiating from a centre, ere long made their appearance. These having been re-crystallized, and examined by the microscope, were seen to consist of quadrangular prisms, with dihedral summits. On exposure to heat they melted into an oleaginous mass, and exhaled the fragrant odour of Tonquin bean—all distinctive characters of hippuric acid—of which I thus obtained several grains. If, therefore, we again introduce M. Garrod's arithmetical formula, substituting, as from the foregoing experiment we are fairly entitled to do, the cinnamic acid for the benzoic acid, let us see what remains:

Hippuric acid (anhydrous) . C₁₈H₈O₅N₁
Cinnamic acid (do.) . . C₁₈H₇O₃

Difference H₁O₂N₁
Twice the difference . . . H₂O₄N₂

No carbon is left, and only two atoms of hydrogen remain—a result wholly incompatible with the hypothesis in question, that is to say, with the production of lactate of urea.

PHRENOLOGICAL ASSOCIATION OF GREAT BRITAIN.—The great meeting of the Phrenological Association will take place every day next week, in London, as it did last year; and it is our intention to report its proceedings. In our next number we shall publish Dr. Englefield's introductory address, which will be delivered in the Great Room of the Society of Arts, on Monday the 20th, at half-past one, Dr. Elliotson in the chair. We are enabled, and in our next number intend, to present our readers with the introductory address delivered by Dr. Elliotson last year, and which has not yet been printed. In our last number, we brought the proceedings of the London Phrenological Society during the past session, down to the end of February, with Mr. Brookes' important and striking paper, and still postpone the further reports of the session till we have finished those of the association.

LONDON UNIVERSITY.—Mr. Rymer Jones has been elected Examiner, in the room of Dr. Roget, whose resignation was announced some months ago.

MEDICAL MEMS. OF THE WEEK.

By PERISCOPICUS.

LITHOTOMY.—Mr. Fergusson, in a case of stone, recently operated on by him, observed, that he had made no provision for the escape of urine, by the insertion of a tube into the bladder through the wound. In the greater number of his own cases, he had followed this plan, having been induced to do so by the distinguished example of Mr. Liston's practice; latterly, however, he had disused the tube; and from his own experience, he was inclined to say, that its advantages had probably been overrated, although the great success of the above-named surgeon might be held as a strong argument in its favour. But it ought not to be overlooked, that there were many other contemporary lithotomists, such as Crosse, Green, Key, Crichton, whose success was remarkable, although they did not use the tube; nor should it be forgotten that its insertion was condemned by Jaques, Ravius, Heisten, and others, and that neither Cheselden nor Martineau, whose individual success in lithotomy was usually considered greater than that attending the practice of other British surgeons, had adopted such a proceeding.

PHRENOLOGY.—Amongst British physiologists who have avowedly embraced phrenology, are Abernethy, Elliotson, Conolly, Lawrence, Billing, Evanson, Johnson, Barlow, Forbes, Solly. It has been adopted as the basis of the plans for the restoration of the lunatic at the Hanwell Asylum and the Dumfries Institution, two of the most distinguished lunatic asylums in the kingdom. Amongst men of science who have given in their adhesion to phrenology, may be enumerated Professors Nicholl, Reid, Drummond, and Wheatstone; Messrs. Buddle, Hutton, Woolhouse, and Snow Harris. Among Continental physiologists who have embraced phrenology, may be mentioned Broussais, Vimont, Bouillaud, Fossati, Voisin, Andral, Ferrus, Sauson, Dumutier, Cloquet, and Elrenberg.

VEGETABLE DIET.—In reference to the interesting case by Mr. Rowbottom, of Stockport, noticed in a recent number, Dr. Dick states, that he can bear strong testimony to the remarkably good effects of a diet of vegetables (one of acidulous fruits, more especially) in many forms of cutaneous disease. It may be stated as a general rule, that when a cutaneous eruption depends on hepatic derangement (not organic), characterized by pain, tumidity, and profuse secretion of the liver; by dark coloured stools (and more especially if these produce *ardorani*), by yellow coated tongue, bitter morning taste of the mouth, accelerated pulse, dry heat of skin, and nocturnal sleeplessness; the judicious adoption of a vegetable diet will be found a most efficacious means of removing that condition of the digestive organs, and that constitution of blood from which the eruption and the unpleasant symptoms enumerated result.

ALBUMINURIA.—Mr. George Robinson has performed an additional series of experiments on six rabbits, to confirm the following passages announced in his memoir on the Pathology of Granular Disease of the Kidney. He there endeavoured to prove "that the acute stage of writers is simply acute nephritis, and that all the varieties of morbid appearances occurring in the chronic stage may be considered as resulting from so many different degrees in intensity and duration of chronic inflammation of the kidney." He says, among other facts I related in support of that view, was an experiment in which, by tying the renal vein of a rabbit, I produced a condition precisely similar to that met with in acute nephritis. In connection with that view of the pathology of the

disease, I attempted to establish the following rule for the explanation of the albuminaria: "That the presence of albumen in the urine is produced by, and its proportional quantity is in a direct ratio to the degree of, congestion of the capillaries of the kidney, from whatsoever cause that congestion may arise." His last repeated experiments also fully corroborate these conclusions. He concludes the paper by saying, "I did not consider it necessary to repeat any more experiments on this head, as my present object is merely to prove the truth of the rule I laid down for the explanation of the presence of albumen in the urine, and to justify its practical explanation in determining at any time the intensity of the renal congestion, by ascertaining the chemical composition of the urine; so far, at least, as the presence and proportion of albumen are concerned. These experiments seem to me to leave no room for doubting the correctness of that rule; and the ready and satisfactory explanation it affords of the *modus operandi* of the numerous and opposite causes to which albuminous urine has been traced by different observers, must tend to simplify the diagnosis of renal disease in general, at the same time that it presents a new method of ascertaining the condition of the circulation in the large nervous trunks of the abdomen.

INSANITY.—From the last report of the Gloucester County Lunatic Asylum, we find that large parties for dancing have always been promoted, as well as dinner and evening parties, when proper, and pleasurable excursions for many hours in the country. Musical entertainments within the walls, and attendance on public amusements, are of so frequent occurrence, that they constitute the practice rather than form the occasional source of astonishment in this asylum. The superintendent endeavours to make his patients feel that they belong to the great community of mankind, and are only temporarily separated for their health's sake; he encourages a great proportion to attend to their religious duties, on Sundays, in places of worship in the city and neighbourhood; and induces all who can or will separate themselves from the asylum, to take their exercise in the surrounding country; whilst, to give encouragement to those who are inclined to be industrious, he employs all he can without the walls, in various ways, and cultivates nearly twenty acres with the spade in the fields adjoining and belonging to the asylum, with scarcely any other check upon their escape beyond the good feeling existing between himself and them.

CONTUSIONS OF MUSCLES.—Mr. W. Allison, of East Retford, observes, that the most interesting circumstance connected with contusions of muscles, is the difficulty of distinguishing those injuries from dislocations or fractures of those bones which form caps for joints. Muscles are bruised by falls or blows; a limb is consequently stiff (whilst lengthened or shortened), and it becomes motionless at the joint, so that neither flexion nor extension can be performed by the subject of the accident; and sometimes considerable swelling ensues before a medical man arrives. The surgeon's attempt to move the limb, in order to ascertain the nature of the injury, produces a painful spasmodic action of the muscles, sometimes without proving advantageous to himself, in his endeavour to find out the precise cause of the loss of muscular action and the stiffness of the limb. He draws the following conclusions concerning these accidents, from cases that have fallen under his care:—1st. The muscle or muscles may be so bruised as to be simply benumbed (with tonic or permanent contraction, or with relaxation), the nerves being affected by the fall or blow, something like the brain from

concussion. 2nd. The muscles may be bruised whilst in action, and remain stiff (with a tonic contraction or with relaxation), so long as they are left at rest; but the moment an attempt is made by the patient or surgeon to move the limb, a violent painful quivering or irregular spasmodic action comes on, and the limb cannot be placed in the natural position. 3rd. Muscles may be bruised with extravasation, or some injury ending in suppuration. 4th. Muscles may be bruised with a laceration of fibres.

IODURET OF POTASSIUM IN SYPHILIS.—M. Chomel has a high opinion of the use of this ioduret in the treatment of constitutional syphilis. In a case of exostosis of the cranium, attended with severe pain and suffering exacerbations at night, evidently depending on a syphilitic origin, the ioduret was administered, and in less than a fortnight the pains in the head were gone, the exostosis diminished in size; a perfect and lasting cure was the result of a month's treatment. In another case the effects of this salt were more remarkable. A lady from the country, to whom her husband had communicated the venereal disease, and who had been inefficiently treated with mercurials, had exostoses on the cranium and elsewhere, and suffered severely. She placed herself under M. Chomel, who gave her pills containing the bichloride of mercury for three or four months; under this treatment she improved for a while; the nodes diminished in size, and her other symptoms were better; but the change was not lasting; the nocturnal pains returned with increasing violence. The ioduret of potassium was then had recourse to, and continued for some time, and with success; at the end of a few months the lady returned home, still, however, persisting in the use of the medicine, gradually diminishing the dose. In this case the cure has been complete and permanent. We have ourselves found this remedy of great service in most cases of secondary eruption, particularly when combined with sarsaparilla.

PESSARY.—One of the most useful contrivances which has lately been recommended to us is the improvement of the common pessary, or rather a substitution for that disagreeable and painful instrument. Mr. Clay, of Manchester, has invented a support for the womb, which we think will be likely in time to supersede the old round or oval pessary. The use of the common wooden or Indian rubber pessary, and indeed of all such large bodies, must necessarily keep the vagina constantly in a state of distension; and consequently there will be but little likelihood for the vagina, at least, to assist in permanently supporting the womb, when the pessary is withdrawn: and moreover, the common pessary is an exceedingly inconvenient instrument, and one which delicate females are very reluctant to make use of, independent of their inability to manage it. Mr. Clay's instrument consists of a coil of steel wire shaped something like a cork-screw, or like the circular springs which are used in spring cushions. On the end which is introduced up the vagina to support the womb, is fixed a caoutchouc ring a little larger in diameter than the cork-screw spring, and sufficiently large to form a good support for the parts; on the other end, which is outside the body, there is a small shield of wood or ivory, which by means of bandages attached to a belt round the body can be securely fixed to the vaginal entrance. By means of this ingenious contrivance we think the womb will be likely to be more comfortably supported than by any kind of instrument yet invented. The vagina will not be kept in a state of distension, and even this may assist in some measure to support the parts. The caoutchouc ring, which is

next the womb, will admit the passage of the different discharges from the womb; and the elasticity of the middle portion will be well adapted to the varied degrees of pressure to which it will be subjected. There have been other instruments invented for supporting the womb in these cases, but which we have not seen noticed in any of the journals. One of these is made by Messrs. Eagland of London and Leeds. It consists of a circular strap or spring that encircles the body like a truss, from this another strap is brought from behind, over the perineum, where there is a spring and pad so as to press regularly on the perineum, and is fixed by two straps in front. This instrument is made in a different way by Mr. Elam of Huddersfield; the pad which presses on the perineum is connected to the posterior and anterior pelvic circular strap by straps containing springs, by means of which the perineal pad is kept in its situation. By means of making continued pressure on the perineum the external aperture is considerably diminished; in this way the womb is prevented from prolapsing; but it is evident that this is only adapted to cases where the neck of the womb completely protrudes, whereas Mr. Clay's instrument may be useful in almost every stage of the descent.—*Mr. Braithwaite.*

VEGETABLE SENSATION.—Is sensation the attribute of animals only? As far as we are capable of judging, this question might be answered in the affirmative. Plants, we may admit, possess irritability, and most of their movements are referable to that property; but unless we can ascertain that they possess consciousness, we cannot affirm that they are sensible. Some of the movements of plants, however, so closely resemble volition and the effect of consciousness, that it is extremely difficult to refer them to simple irritability. Thus in the *Hydesurum gyrans*, a plant whose leaves consist of a large middle leaflet, and two small lateral leaflets, the influence of the light of the sun is said to impart motion to the central leaflet; but there is an incessant rising and falling of the lateral leaflets, independent of all external stimuli. I do not mention those well known instances of flowers, such as the common Chickweed, *Stellaria media*, the purple Sandwort, *Arenaria rubra*, the Pimpernel, *Anagallis arvensis*, nor the Gentianella, all of which, and many others, close their petals at the approach of rain—as there is no doubt a powerful influence exerted by atmospheric changes on plants. Those plants also that close their leaflets, such as the clover, and droop their branches, like the sensitive plant, may be supposed to owe their diurnal movements to the light, which acts on their irritability during the day and expands their leaflets, being withdrawn at night; but this cannot be affirmed of the *Oscillatoria*, that are undoubtedly vegetables, yet display a continual vibrating motion. Some movements of flowers and of their stamens, indeed, seem almost to indicate design, thus the aggregate florets of the white clover display this in a remarkable manner. As soon as the first circle of florets have shed the fertilizing granules of their anthers, and the fruit is impregnated, a function for which the agency of light and of air seems essential, the florets turn down, as if purposely to permit the next circle to obtain fully the influence of these agencies. This circle being impregnated, the florets also turn down; and thus in succession each circle assumes the downward position, until the fertilizing function of the whole be completed. The *Valisneria spiralis*, and aquatic plant found in Italy, has the male and female flowers on distinct plants. The female flowers stand on long spiral stalks, which uncoiling, elevate

them to the surface of the water, and enable them to blow or expand in the air. The male plants are affixed on short straight stalks, at the bottom of the water, but, as soon as they are ready to shed their pollen, they separate from the stalks, rise to the surface, expand, and scatter their pollen over the female flowers. When this is accomplished, the spiral stems contract by coiling, and the female flowers sink to mature the fruit at the bottom of the water. The flower of the Rue, *Ruta graveolens*, has ten stamens, which spread nearly at a right angle with the germen, and are so stiff, that they cannot be artificially raised without the risk of being broken, but they nevertheless all rise, each in its turn, successively, and bend over the pistil until the pollen is shed, after which they spontaneously fall back upon the petals. Some other plants, in the same manner, display spontaneous movements. But the most remarkable movements in vegetables is observed in some of the lower genera. The zoocarpiæ of Bory St. Vincent are apparently mere jointed threads, yet they emit germinal granules that move about like the infusoria, and then again assume the vegetable form. Sensation, therefore, and voluntary motion, if they cannot be proved to exist in plants, cannot positively be denied to some of the tribes of the vegetable race, which therefore seem at least to form the connecting link between the two divisions of organized beings.

DEAFNESS FROM QUINA.—Dr. Lugeol, of Havannah, publishes the particulars of several cases, in treating which he gave large doses of the sulphate of quinine, the administration of which was followed by more or less deafness, lasting from twelve hours to two or three days, and disappearing gradually, without leaving any injurious effect behind it.

BOTANICAL MISTAKES.—The roots of Gentian, says Dr. Todd Thompson, are sometimes mixed with those of Belladonna and Aconite; very dangerous adulterations, which, however, can be readily detected by one whose eye has been educated to observe the physical characters of roots. On the continent, Sarsaparilla is adulterated with the roots of Asparagus, those of *Carex arenaria*, and even with the stems of the hop. Among the roots of *Serpentaria*, also, we sometimes find those of *Aristolochia tomentosa*, and *Spigelia marilandica*. The rhizomes of Bistort are often mistaken for those of Tormentil, an error, however, of little consequence. The bark of *Canella alba* is substituted daily for that of *Wintera aromatica*, which belongs to a distinct natural order, and possesses different medicinal properties. From the great resemblance which exists with respect to the leaves of the umbelliferous plants, we find those of *Conium* confounded with those of *Arethusa cynapium*, *Cicuta virosa*, *Myrrhis temulenta*, and several others. Few specimens of fox-glove leaves, collected by the ordinary herb collectors, are free from leaves of *Verbascum*, or of Comfrey, *Symphytum officinale*, an adulteration which is instantly detected by the botanist. Among the leaflets of senna are found the leaves of arguel, *Cynanchum oleaefolium*, the leaflets of *Tephrosia apollinea*, and *Coriaria myrtifolia*; all of which can be readily detected by their forms. Lastly, the leaves of *Uva ursi* are mixed with those of cowberry, *Vaccinium vitis idæa*. Among flowers we find those of *Matricaria chamomilla*, and *Pyrethrum parthenium*, mixed with, and substituted for those of the true Chamomile, *Anthemis nobilis*. To the eye of the botanist they are easily detected by the absence of the scales, or paleæ, that are present between the florets, on the receptacle of the true Chamomile. The stigmas of Saffron are adulterated with the florets of Marygold, a fraud which is instantly

made evident by putting them into hot water, when the distinction between the *stigma* and a *ligulate floret* is at once recognised by any one who knows these floral organs. Pimento is said to be sometimes mixed with *Cocculus indicus*; but, should this ever be the case, the latter is easily distinguished from Pimento by the absence of the persistent calyx, as well as the bitterness and the want of aroma.

LUPUS.—Dr. Payan, of Aix, thinks that lupus is a disease of a local character, totally independent of a constitutional origin. The treatment must be local, and varied according to the cases, the topical applications being selected from those which, like styrax and the unguentum styracis, are sufficiently stimulant to modify the diseased action of the ulcerated surface, or, like the caustics, to disorganise its structure. Liquid caustics, such as nitric acid and the acid nitrate of mercury, are of but little use, because their action is too transitory. Rousselot's powder is the caustic preparation preferred by M. Payan; it is composed of four parts of powdered white arsenic, thirty of cinabar, and thirty of sanguis draconis. Corrosive sublimate or the caustic paste of Vienna may also be employed. In the treatment of lupus, especially when cicatrisation is taking place, this pathological law must be remembered, *that when any wound has been open a long while, it becomes a natural emanatory, requiring the formation of an issue, in order that the cure may be perfect, and the general health unaffected.* M. Payan narrates four cases, the first of which was cured by the application of the nitrate of mercury and the liquid styrax, the second and third by Rousselot's powder, and the fourth by the Vienna paste.

STATISTICS OF PHTHISIS.—Dr. Hughes has collected a series of cases of phthisis observed by himself, from which he obtains the following statistics:—The number of cases is 250, of which 175 were males and 75 females; of these there were 203, of which 138 were men and 65 women, whose chests were only explored during life. The remaining 48, of which 37 were men and 11 women, were examined after death. Of these, the left side was chiefly diseased in 116 cases, or 46 per cent.; the right in 89, or 36 per cent.; the more diseased side was doubtful in 45 cases, or 18 per cent. Of the 116 cases on the left side, there were 76 males, 43 per cent., 40 females, 53 per cent.; of the 89 cases on the right side, there were 66 males, 38 per cent., 23 females, 30 per cent.; of the 45 cases in which the more diseased side was doubtful there were 33 males, 19 per cent., 12 females, 16 per cent. Of the 48 cases examined after death, of which 11 only were females and 37 males, the tubercles were confined to the left lung in 3 males and 1 female, and to the right lung in 1 male only. From this it appears that there is a somewhat greater liability to tubercular action on the left side of the chest than on the right. Of these 250 cases, the upper lobe of one or both lungs was solely or principally diseased in 237, or 95 per cent. Of the 13 remaining cases, of which 11 occurred in males and only 2 in females, there were 9 or 3 and 3-5ths per cent. of the whole number, in which both lungs were universally and uniformly diseased; of these, 8 were males and 1 was a female; of the remaining 4 cases, the upper lobe in 3 was at least equally affected with other parts, and in the fourth the tubercles were deposited in the base, and were not found in the upper part of the lung. This last case was that of a poor boy, who had large opaque tubercles in the peritoneum, diseased mesenteric glands, focal abscess from ulceration of the intestine, chronic bronchitis, a few tubercles in the right lung, suppurating bronchial glands, and at the

base of the left lung largely-dilated bronchial tubes filled with purulent mucus, and chronic pneumonia. There were also in the same part a few transparent tubercles, and in one portion, about as large as a walnut and not consolidated by pneumonia, there were several of these bodies, which were larger and perfectly opaque. Tubercles are deposited first in the upper part of the lung in the proportion of 94 per cent. After puberty, phthisis is most generally fatal between the ages of 20 and 30; next, between 30 and 40; then between 40 and 50; below 20 and above 50 the mortality from this disease is very much diminished. Fewer females than males affected with this disease attain the age of 40; in other words, women die of consumption at rather an earlier age than men. Dr. Hughes states further, that tubercles may be simultaneously deposited throughout both lungs, and may then present no other physical signs than those of bronchitis, but this form, which is comparatively very rare, is not necessarily acute, and confined to young persons.

MALARIA.—Mr. Braithwaite says the connection between malaria and the evolution of sulphuretted hydrogen from different localities, is strikingly pointed out in an interesting paper by Professor Daniell. He seems clearly to prove that the unhealthiness of particular places, as the western shores of Africa, and particularly where large rivers empty themselves into the ocean, is owing to the evolution of sulphuretted hydrogen, produced by "the decomposition of the sulphates in the waters by the carbonaceous matter of vegetables." So small a mixture as a fifteen hundredth part of sulphuretted hydrogen in the atmosphere, acts as a direct poison upon small animals, and produces very uneasy sensations on the human body. When in larger proportions its effects are still more remarkable, producing sudden weakness and all the signs of asphyxia. The fatal effects of a communication of the sea water with inland marshes, was observed by Signor Giorgini in 1741, exactly a century ago, on the borders of the Mediterranean. Dr. Robert Hamilton, of Lyme Regis, noticed the same fact in 1793. Dr. James Allan, in his paper "on some of the predominant diseases of the African islands," arrives at the same conclusions, without, however, giving the explanation which Professor Daniell does. It seems evident that wherever such decomposition goes on as to produce the evolution of sulphuretted hydrogen, the dreadful effects of miasma will follow to the animal system. And it is highly satisfactory that Professor Daniell, having so clearly traced the cause of this pestilential influence, has also directed us to the remedy, namely, *chlorine*. Chlorine and sulphuretted hydrogen cannot co-exist together. "Plentiful fumigations of chlorine would therefore infallibly prevent the deleterious effects." This ought to be particularly known in Africa and the islands adjoining its eastern coast, Madagascar, &c., and also in the unhealthy climates of the east and west, where there is frequently every facility afforded for the intermixture of the water of the ocean with the immense quantities of vegetable matter washed down by the rivers and torrents from the luxuriant soil.

RADICAL CURE OF HERNIA.—Dr. Heidenreich, of Ambeck, has radically cured fifty cases of simple hernia with the *osmunda regalis*, according to the method of P. Simon. He digests two drachms of the coarsely-powdered root of the plant in a pint of wine for eight days, the whole of the tincture thus prepared being administered at two doses in one day. In cases of necessity he uses the entire plant. At the same time he gives a small spoonful of the powder of the plant twice a-day. To those who cannot bear wine, an aqueous infusion is given.

On the hernial aperture he applies compresses soaked with the following decoction, and kept in situ by a band. *Radicis tormentillæ*, two and a half ounces; *gallarum*, ten drachms; *radicis calami aromatici*, ten drachms; *aquæ*, two pints. Boil for eight or ten minutes, and filter. M. Heidenreich occasionally wets the compresses with an ammoniacal solution, and, if it cause phlogosis, has recourse to Goulard's extract of lead ointment to remove it. In one of the cases the *osmunda* cured an habitual diarrhoea of long standing. Dioscorides attributes similar virtues to the *osmunda lunaria* of Linnaeus.

MEDICAL NEWS.

MEDICAL BENEVOLENT SOCIETY.—This society held its commemorative dinner on Saturday, at the Freemasons' Tavern. On the chairman giving "Prosperity to the Medical Benevolent Society," Mr. Pope, the acting treasurer, returned thanks. He stated that there were not fewer than 2,000 of the medical profession resident in London, and not less than 8,000 resident in the country, all of whom might become recipients or benefactors. He regretted that much misunderstanding had gone abroad with respect to the objects of the society. It was not (he said) the wish of the directors to dole out such a niggardly and paltry pittance to its objects as they would be degraded by accepting, but to afford such timely and efficient relief as would enable them, when overtaken by unforeseen difficulties, boldly to meet them, and thereby to retain their position in the profession, and in doing generally what it was the earnest wish of the directors of the institution to advance. He mentioned two cases which had been relieved during the last year. The first was that of a gentleman of long standing in his profession, who, from illness and losses in his family, had found himself unable to meet his engagements at the close of the year, and to whom the society had advanced £110. The second was the case of a much younger man, who, in the pursuit of his profession, experienced an accident, which for a time paralysed both mind and body, during which time his circumstances became embarrassed, and on his condition being made known to the society, they presented him with £150, which enabled him not only to meet his difficulties, but to pursue his profession with honour and credit, and to return to the society as a donation a portion of the sum given. It was his desire to set before his medical brethren the fact that the society consisted of only 149 members, and out of that number 74 were life members, leaving only 75 subscribing members. The medical professor was known to feel great sympathy for his fellow-creatures; and how much more ought he to show to the members of his own profession! He was not without hope that there would shortly be an accession to the number of the members. The sum subscribed did not exceed £100, the chairman having subscribed £25 of that amount.—[We quote the above from a Morning Paper.]

POOR LAW.—The commissioners, in answer to several communications, objecting to the exclusion of Scotch and Irish medical men from English Union appointments, have issued the following reply:—"As the applications which these letters make to the commissioners, and the arguments by which they are supported, appear to the commissioners to rest on a misconception of the legal bearings of the case, the commissioners think that they would adopt a course satisfactory to the gentlemen whose interests are more immediately affected, and respectful to the learned bodies in Scotland and Ireland, which grant the medical diplomas, in

stating fully and distinctly the grounds upon which they have proceeded in making the regulations in question. In framing the third article of their recent medical regulations, the commissioners have attempted to describe the qualification for the appointment of medical officers in a union in England or Wales, in conformity with what they understand to be already required by law in respect of that qualification. The commissioners do not consider themselves empowered to confer on any person by their orders the privilege of practising medicine, or to revoke the prohibitions against such practising contained in the laws relating to the profession of medicine in England. The commissioners have declared an English licence to practise to be a necessary qualification of a medical officer of a union in England or Wales, and they have not ventured to admit that a Scotch or Irish diploma, degree, or licence, is a sufficient qualification of such an officer in England or Wales. In ascertaining the existence of the qualification of medical officers, the commissioners considered that they had no discretion but to adopt those criteria of qualification which the statute law, applicable to England and Wales, has prescribed. The commissioners understand that the guardians of unions are to be guided in their choice of medical officers by the words contained in the definition of 'officer' in the 109th section of 4 & 5 Wm. IV., c. 76, viz.: 'Person duly licensed to practise as a medical man.' These terms appeared to the commissioners to indicate the necessity of a distinct and positive licence to practise derived from some special authority empowered to give such licence, and not to be satisfied by the mere possession of personal skill and capacity of the candidate, however great these might be, or whatever might be the testimonials of his ability, if these testimonials did not constitute a specific licence to practise in England and Wales. As the officer must perform his duties within England and Wales, it appeared to the commissioners that the licence must be derived from some body capable of conferring privileges, and of intervening in restraint of non-qualified persons in England and Wales. In other words, the terms of the statute seemed to the commissioners to exclude all those persons, however capable they may be, and however that capacity may be vouched, who practise by sufferance only and with impunity, but without a positive licence from some authority competent to confer a licence in England and Wales. Such authorities are,—1. The College of Physicians, having power to confer a licence to practise and to restrain unauthorised persons from practising over the whole of England and Wales, and exclusively within the precinct of London. 2. The Universities of Oxford and Cambridge, having power to confer an authority throughout England and Wales, excepting in the precinct of London. 3. The College of Surgeons, having power to confer a licence to practise surgery throughout England and Wales, and the rest of his Majesty's dominion (18 Geo. II., c. 15, s. 8). 4. The ordinaries of the several dioceses in England and Wales, having power to confer licences within their respective dioceses; and, 5. The Court of Examiners of the Apothecaries' Company, having power to confer a licence to practise as an apothecary throughout England and Wales. In all these cases the territorial limits of the authority are expressly defined, the licence to practise surgery being the only one which extends beyond England and Wales. The prohibitions to practise are equally defined by the territorial jurisdictions of the bodies empowered to confer licences, except alone the case of the College of Surgeons, who may apparently licence a person to practise surgery anywhere in he

Majesty's dominions; whereas the prohibition to practise surgery without the licence of the college does not extend to any of her Majesty's dominions out of England and Wales. The prohibitions contained in the statute 3 Hen. VIII., c. 11, and 14 Hen. VIII., c. 5, exclude every person from practising physic anywhere in England and Wales, unless he is a graduate of Oxford or Cambridge, or admitted to practise by the College of Physicians, and even exclude the graduates of Oxford and Cambridge from practising within seven miles of London. The charter of Car. I., confirmed by 18 Geo. II., c. 15, prohibits every person from practising surgery in England and Wales, unless he be admitted by the College of Surgeons, or be approved by the ordinary, &c., of the diocese, or be a physician. The 55 Geo. III., c. 194, prohibits every person from acting as an apothecary in England and Wales, who has not a certificate from the court of examiners of the Apothecaries' Company, or was not in practice at the time of the passing of that Act. On the consideration of these provisions, it appeared to the commissioners that the law required the licence to be derived from a body having authority in England and Wales, and that a degree or diploma of a Scotch or Irish university, or other body, having power to confer an authority to practise in Scotland or Ireland, is no such licence to practise in England or Wales, as is required by the Poor-law Amendment Act for a medical officer of a parish or union. It is not within the province of the commissioners to inquire what may be the privileges conferred in Scotland or Ireland, by a degree or diploma in medicine, granted by a Scotch or Irish university or college, or other medical authority; but they apprehend that in England and Wales the effect of such degree and diploma is governed by the provisions above referred to. The degrees of English universities themselves have only a local effect in England and Wales, being inoperative in the precinct of London; yet the privileges of these universities are expressly saved in the several statutes prescribing the qualifications of the medical profession. In the same manner the licence to practise, which an ordinary of a diocese can confer, is a complete and ample licence within the diocese, but it is inoperative beyond it. However ample, therefore, the authority conferred by English, Scotch, or Irish degrees, or diplomas, may be within the limits of the jurisdiction of the bodies which grant them, the commissioners conceive that it is not possible to infer that a licence in one place, whether derived from English, Scotch, or Irish authorities, operates as a licence in every other part of the United Kingdom. This view of the subject appears to the commissioners to be settled by the decision of the Court of Queen's Bench, in the case of the Apothecaries' Company v. Collins (4 B. and Ad. 604), Easter Term, 1833. In that case the defendant had a physician's diploma from a Scotch university. Now an English physician is exempt from the penalties of the Apothecaries' Act; but the Scotch diploma was held to confer no such exemption. In that case also the effect of the articles of union (4) between the kingdoms of England and Scotland, declaring that 'there shall be a communication of all rights which belong to the subjects of either kingdom, except where it is otherwise agreed in the articles,' was cited in argument, but no weight appears to have been attached to the argument by the Court. The same article has been pressed on the consideration of the commissioners; they, however, do not understand it to have any reference to the special and exclusive powers of officers, courts, or privileged persons, so as to confer on

such officers, courts, or privileged persons, the like peculiar and exclusive powers within the one country, as they have by virtue of their office or personal privilege in the other: for instance, the professional privileges of the different ranks in the legal profession in the one country, have never been supposed to confer the corresponding privilege in the other country. But what has never been denied is, that the common 'rights' of 'subjects' of both countries, which are obviously distinguishable from the exclusive powers of privileged persons, are inter-communicated by force of the article in question, and accordingly there is no doubt that every subject of the United Kingdom is equally competent in law, on performance of the required conditions, to acquire the local privilege in England of practising as a physician, or surgeon, or apothecary, or as a barrister, or serjeant-at-law, or attorney, or solicitor, as he has equally the right of every other subject to acquire, by performance of the appropriate conditions, every other privilege, personal or local, which can by law be enjoyed by a subject. The commissioners are, for the reasons here assigned, unable to find, either in Acts of Parliament, or the articles of Union, or in the decisions of competent tribunals, any authority which would enable them to admit an Irish or a Scotch degree, or diploma, as such a licence to practise medicine, as would qualify a person for the appointment of medical officer. The commissioners are bound by the law as they find it; they are satisfied that they have not the power to relax the existing statutory prohibitions, so as to make such degree or diploma a lawful qualification. It is, indeed, open to the College of Physicians or the Apothecaries' Company to abstain from prosecuting such persons as practise without full authority. In adopting this course, those bodies would merely abstain from using a power of prosecution which they might use or not, as they judged fit; they do not affect, by abstaining from prosecuting, to give the authority to practise or to revoke a statutory restraint. But it is a widely different thing, and one not competent to the commissioners, to declare affirmatively that such persons have the qualification to be medical officers. In affecting to do so, the commissioners must do more than acquiesce; they must assume to repeal what they believe to be the statute law. On the other hand, if legal authority could be shown to the commissioners, justifying the admission of such persons, they would in like manner consider themselves bound by that authority, and would gladly declare the competency of a body of persons whose skill and capability as a class are admitted to be beyond question, and who have, equally with the medical practitioners licensed in England, derived their authority to practise from a legally constituted body, within the United Kingdom. The commissioners, however, do not conceal from themselves that the present state of the law, with respect to the licensing of medical practitioners in the United Kingdom, is unsatisfactory; and the department of administration with which they are concerned has afforded them frequent experience of the practical inconveniences and injustice which it produces. The remedy for these evils, however, does not lie within the limited functions of the commissioners, and can be applied only by the power of Parliament. If Parliament should at any time revise the existing law, and establish a uniform medical qualification, extending over the whole of the United Kingdom, and rendering every person so licensed a competent candidate for a union office in England, it would be the wish not less than the duty of the commissioners to give im-

mediate and complete effect to so wholesome a regulation."

VACCINATION.—The Brentford Board of Guardians have placed a notice to the following effect in their books for discussion at their next meeting, viz:—"That it is desirable that in future all contracts for vaccination shall be confined exclusively to the medical officers who shall be elected." The learned gentlemen who support this proposition will be astonished to hear that one of the first principles of the Vaccination Act is to extend vaccination, by offering a remuneration to every medical man who will undertake to perform the operation.

NOTICE.—The museum of *Materia Medica* and Pharmacy, attached to the London Ophthalmic Hospital, Moorfields, is open daily, from eight o'clock till four. Cards of admission may be obtained, by application to Mr. Thomas Heward, house-surgeon, at the hospital.

INK.—A sample of a new ink has been sent to us, manufactured by Mr. Johnstone, chemist, of Edinburgh, and made according to the principle approved of by M. Arcoy, of the French Academy of Sciences. It has our warm approval.

ROYAL COLLEGE OF SURGEONS, LONDON.

List of gentlemen admitted members, on Friday, June 10th, 1842:—

Charles James Symonds; William Taylor; Robert Roberts; Thomas William Damant; George Trevor Roper; William Henry King; Justin M'Carthy; James Armstrong; James Russell; William Bryckwood Tomkin; Anthony Peat; Richard Palmer; George Charles Stapoole; Howell Evans.

Admitted Monday, June 13th, 1842:—

David Simpson Penrice; Corbett Whitton; John Wilson; John Henry Pollard; Edgar Sheppard; Edward Dudley Hudson; John Richards; Richard Forth Snape.

MEETINGS FOR THE ENSUING WEEK.

- MON. 20. Botanic Gardens, Chelsea, 9 a.m.
— Statistical Society, 8 p.m.
— Phrenological Association, half-past 1 p.m.
TUES. 21. Horticultural Society, 3 p.m.
— Linnean Society, 8 p.m.
— Electrical Society, 8 p.m.
— Phrenological Association, half-past 7 p.m.
WED. 22. Botanic Gardens, Regent's Park, 1 p.m.
— Royal Medico-Botanical Society, 8 p.m.
— Microscopical Society, 8 p.m.
— Pharmaceutical Society, 9 p.m.
FRID. 24. Botanic Gardens, Chelsea, 9 a.m.

ADVERTISEMENTS.

FALLACIES of the FACULTY. By SAMUEL DICKSON, M.D. Second Edition, enlarged, price 10s.

"Was ever such an ass as that,
Who hoped by slicing mutton-fat,
And pulling candle-wicks to pieces,
To tell why *Light* should spring from *Greases*?
Yes, one, that still more precious fool,
Who in the Anatomical School,
Expected with dissecting knife
To learn from *DEATH* the laws of *LIFE*!"—BERANGER.

CONTENTS.—Human life, a succession of greater and lesser periodic movements or fits—"a fitful fever"—All diseases likewise come on in fits—all have periodic intermissions with alternate chills, heats, and low spirits—intermittent fever, the type of all, proved by the success attending the chemo-thermal treatment of asthma, epilepsy, apoplexy, gout, rheumatism, influenza, eruptive disorders, &c. Medicine and poison identical—the action of both proved to be electrical—An electric difference of the brain's condition (positive or negative) determines whether opium shall produce sleep or wakefulness—copious increase or cure discharges—bark and arsenic cause or cure fevers—how the passionate cure and cause diseases—change of motion and change of temperature equally the law of disease, remedy, and cause—caloric, a mere phantom of the schools—trickeries and errors of pathological professors—blood-letting and starvation, the most fatal of all fallacies, instanced by the cases of Byron, Scott, Canning, Malibran, &c.—Homeopathy, animal magnetism, &c., explained and exposed—Résumé of the chemo-thermal system and its application, &c. &c.

London: Simpkin and Marshall. Edinburgh: Oliver and Boyd. Dublin: A. Milliken.

Lately Published, by Hatchard & Son, Piccadilly, price 7s. 6d.

ON THE REMOTE CAUSE OF EPIDEMIC DISEASES; with an Inquiry into the Origin of certain Atmospheric Vicissitudes that occur at Epidemic and other Periods. By JOHN PARKIN, Author of a Work on the Cause, Nature, and Treatment of Gout.

They (the Author's analogies between volcanic and epidemic phenomena) evince great research after facts, and considerable ingenuity in harnessing these facts to the car of his theory.—*Med. Chir. Review.*

ROYAL POLYTECHNIC INSTITUTION

Mornings and Evenings, except Saturday Evenings.

The COLOSSAL ELECTRICAL MACHINE, worked by Steam Power, and exhibiting the ELECTRIC LIGHT, the AURORA BOREALIS, and various Experiments on a grand scale. New additions to the ENLARGED and IMPROVED DISSOLVING VIEWS, part of which form a Series intended to illustrate the SCENERY of the HOLY LAND, copied from the beautiful work of David Roberts, R.A., by permission of Mr. Moon, the Publisher of Threadneedle-street. Lectures which demonstrate the latest advances made in practical Science. The ORRERY, DIVING BELL, and DIVER, with Experiments in the Water. PHOTOGRAPHIC PORTRAITS taken Daily by Mr. Beard.—Conductor of the Band, Mr. Wallis.—Admission, One Shilling.

THE BOTANICAL MUSEUM OF THE LATE A. H. LAMBERT, Esq.

MR. S. LEIGH SOTHEY, Auctioneer of Literary Property, of Wellington-street, Strand, has received instructions from the Executor to announce, that on MONDAY, June 27, and two following days, he will SELL BY AUCTION,

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THIRD—WOODS, in entire or partial stems, with sections of barks, &c.

To give a few particulars of the various Collections of Dried Plants, in anticipation of the descriptive Catalogue now preparing, it is sufficient to state, they include those, or portions of them, which have been brought home by the various circumnavigators and travellers:

Azelius	Forster	Russell
Brown	Hamilton	Salt
Clark	Labillardiere	Sir G. Staunton
Cripps	Menzies	Lord Valentia.

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Clanssen	Hartweg	Schimper
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The Sale will take place at 26, Lower Grosvenor-street, the Residence of the late Mr. Lambert; and Catalogues will be ready on the 1st of June, and may be obtained at the place of sale, and at the Offices of Mr. S. Leigh Sothey, Wellington-street, Strand; also at Par's of Fortin, Masson and Co.; Hamburg, Perthes, Besser and Mauke; Berlin, Aug. Krantz and Co.; Vienna, F. Rauch Schönburnu; Rotterdam, Dr. Mignel.

IMPORTANT.—KINAHAN'S CELEBRATED
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PETER MORRISON, Resident Director.

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COURSE OF LECTURES ON THE THEORY AND PRACTICE OF MEDICINE.

Delivered by C. J. B. WILLIAMS, M.D., F.R.S., Professor of the Practice of Medicine, and of Clinical Medicine, at University College.

GENTLEMEN,—The first of the constitutional predisposing causes that presents itself to our attention is undoubtedly *hereditary predisposition*, or that tendency which is so frequently exhibited in children to suffer from the same species of disease that was manifested in their parents. Thus, gout, epilepsy, mania, scrofula, and many other affections, are said to “run in families.” There is no question as to the truth of the statement. It is not necessary, however, that because the tendency is inherited, the malady to which the tendency leads should be developed at the time of birth. It frequently happens that such development is not observed until the addition of circumstances favouring its *excitement*, which circumstances may be delayed even to an *advanced* period of life. It is by no means a very rare occurrence for the children of unhealthy parents to escape altogether the development of the tendency they inherit, and yet to transmit the predisposition to *their* own children, who may manifest the original disease in its most active characters.

Closely connected with this hereditary tendency is the subject of *temperament*, which implies a certain predominance of one class of functions over the other classes, which renders the more active one especially liable to be affected. The term *diathesis* expresses very nearly the same condition. The temperaments usually enumerated are four; namely—

1st, The *sanguineous*, in which the fulness and activity of the vascular system is the leading characteristic, and with which is, consequently, associated a proclivity to disturbances of that system.

2nd, The *bilious* temperament, which is marked by inactivity of the biliary functions; and hence the system suffers particularly from the result of their derangement.

3rd, The *lymphatic* temperament, which is just the reverse of the sanguineous, and is productive of maladies indicating *deficiency* of vascular action.

4th, In the *nervous* temperament, or diathesis, there is peculiar susceptibility in the nervous apparatus, and a great tendency to irregularity in its operations.

The next constitutional predisposing cause is that of *age*; and we shall find that its influence is considerable. In *infancy* the power of maintaining temperature is, as you know, imperfect; and hence there is a remarkable liability to suffer from the application of cold; and the part that is most frequently the seat of its action is that which is, perhaps, the most tender, viz., the alimentary canal. This shows us the great importance of regular and sufficient clothing.

Another source of disease at this period is the untried state of the gastric and intestinal viscera, which must necessarily suffer to a greater or less

degree from the introduction of foreign matters. The presence of the mother's milk is quite sufficient to cause irritation and distress. Similar results arise at the time of weaning, when a variety of new substances are taken into the alimentary passages.

Another predisposing cause of disease that operates in young children is the *excitement* to which the *brain* is subjected when they are first brought, as it were, into contact with the world—the objects that attract their attention are entirely new, and are calculated to produce an over-stimulus in the perceptive organ: hence we find affections of that organ so common at an early age.

Teething is another crisis in the lives of children, and is attended frequently by various and serious irritations.

From *childhood* to the time of *puberty* there is a great liability to derangement of the digestive and assimilative functions; and thus arises the pale and unhealthy appearance that we so often notice. There is also a peculiar proneness to what we may term *plastic* inflammation in those whose nutritive processes are actively performed. An example of this species of inflammation is found in *croup*, which leads frequently to the formation of a lining of coagulable lymph upon the mucous membrane of the trachea. It is this lining, or, as it is termed, false membrane, that evidences the plastic tendency.

The nervous system being generally excitable in children, as is exhibited by the restlessness of their characters, it is no wonder that many of them are the subjects of chorea, either in a decided or more modified form.

The age of *puberty* brings with it many morbid liabilities in the *female* sex. If the menstrual function should fail, from any cause, to be well established, the whole system must necessarily suffer in a variety of ways: hence the great importance of due attention to the female economy at this period. Cessation of growth is another critical era. At this time there is a predisposition to active hæmorrhages, and the development of *pulmonary* diseases. The nutritive functions having been in full exercise during the progress of growth, do not become suddenly checked when increase in stature ceases; and thus, you see, a loss of balance is very likely to occur, and the tendency to active maladies be excited.

Adult age can scarcely be said to be *peculiarly* liable to *any* class of diseases, excepting such as may be connected with the particular *occupation* of the individual.

When the generative power ceases there seems to be an especial proclivity to the occurrence of *malignant* diseases in both sexes.

As *old age* approaches, the nutritive function becomes impaired, or unequally distributed; the muscles become thin and feeble; the elasticity of the arteries is diminished; the veins suffer distension, and the capillaries lose the susceptible vitality that they evince in the blush of youth.

If the heart is moderately strong, and the vessels not diseased, the circulation may still go on without material interruption. If its action should, however, be too strong, the organs in its vicinity especially will be prone to injury; and hence may arise plethora in the brain and lungs, with the results to which such a condition may give origin. If, on the other hand, the heart be weak, there will be *deficient* circulation, with a tendency to *venous congestions* of various organs, and also to dropsical effusions. If the supply of blood be very defective, even mortification may occur in the parts most distant from the *centre* of the circulation. Of this we have an example in what is called “gangrenæ senilis.” I do not here go fully into all the separate diseases that may be produced by the predisposing causes, but only give you the *principles* on which these causes act, with a few illustrations, to render such principles more clear.

We now pass on to consider some of the *EXCITING*, or external causes of disease, by which the occurrence of disease is *determined*. These may be subdivided into *two* classes, namely, those agents, physical and moral, of which our senses are cognizant, independently of their action as *causes of disease*, such as chemical and mechanical agents, muscular exertion, mental emotion, and the like; and, secondly, *non-cognizable* agents, or those of which we have no knowledge, excepting that which is taught us by observation of their *effects*; these are endemic, epidemic, and contagious causes. We shall commence with the *cognizable* agents, and may first mention a few that act *mechanically*. Thus, for instance, *tight dress* is a mechanical cause of disease. There are many ladies who can bear testimony to this fact by painful experience. It must follow, that if great pressure be constantly kept up upon the liver, lungs, and stomach, neither of these organs can possibly perform its functions healthily; hence arise biliary complaints, dyspnoea, dyspepsia, and an endless variety of serious consequences. There are also mechanical causes that operate *internally*, as particles of dust irritating the air passages, the presence of calculi in the bladder and gall ducts, hardened *fæces* in the intestinal canal, excessive quantity of food in the stomach. Tumours also act mechanically, by impeding the circulation, or by pressure upon nervous branches.

The *chemical* causes are still more numerous. These consist in the introduction into the system of chemical substances that are well known to produce morbid phenomena—such, for instance, as strong acids and alkalies, also the whole catalogue of mineral and vegetable poisons. These causes may arise, too, *within* the body, as seen in the defective performance of the many chemical processes that are constantly carried on.

Again, the *solid and liquid ingesta* are fertile sources of disease. Food may be too nourishing, and thus induce plethora and excitement, or it may be deficient in nutrient principles, and give rise to debility and *anæmia*, or it may be positively unwholesome—an example of which is found in the production of scurvy, &c., by the long use of *salted* provisions; or it may be wanting in some essential ingredient. Thus it is ascertained that one element alone is not adequate to sustain the system for any considerable length of time.

Privation of food may cause, among other evils, inflammation of the mucous membrane of the stomach and intestines. The natural mucous secretion becomes depraved, and by its irritating properties may excite the secretion of gastric juice, which having no food to act upon, will do injury to the stomach itself. There is no doubt whatever that the gastro-enterite that so commonly occurs in the hospitals in France, is prolonged and increased, if not actually caused, by the severe regimen prescribed.

Violent and long-continued *muscular exertion* is another exciting cause of disease. It hurries the blood to the heart, and resists its distribution through the arteries. The *brain* is especially subject to suffer; hence arise giddiness, noises in the ears, deafness, flashes of light before the eyes, and even convulsions, paralysis, and death. The *lungs* also suffer much from congestion thus caused; the blood is returned to them more rapidly than they can effect its oxygenation. The liability to mischief from violent exercise is greatly increased if there be any defective *structure* present in an organ.

A fifth exciting cause is *mental emotion*. There is no doubt whatever that the state of the mind influences remarkably the state of the body. We all know, for example, the effects produced upon the *heart's* action by sudden joy, fear, surprise, &c. In some cases, even fainting may result from some of these causes; and a sudden shock has, in a few instances, been actually followed by instant

death as a consequence. The influence of the mental emotions upon thesecretions, as the gastric juice, saliva, urine, milk, &c., is very striking; but there is, perhaps, no function more under their agency than that of the uterus.

In illustration of the effects that are produced upon the secretions by mental emotions, I may mention the production of dyspepsia, or the arrest of the supply of gastric juice that occurs upon the announcement of alarming news immediately after taking a meal.

Long-continued depression may cause not only numberless *functional* disorders, but also may give rise ultimately to *organic* lesions, such as chronic thickening, ulceration, and even scirrhus of the stomach, also to various tubercular diseases.

Too great mental exertion must naturally injure especially the organ through which the mind operates, and thus inflammation of the brain may be excited; also epilepsy, tremors, hysteria, nervousness, &c., or the activity of the mental faculties alone may be impaired, and various forms of insanity may be determined.

Another cognizable exciting cause of disease, is the *suppression or diminution of evacuations*, which are either strictly natural, or have become so by long establishment. Thus, if the regular excretion from the alimentary canal does not take place, but the matters that ought to be discharged remain for a considerable time in the large intestines, decomposition will commence, and parts of the fecal contents be absorbed and carried into the system; hence will arise headache, factor of the breath, nausea, loss of appetite, &c., and, after a time, the contact of the acrid matter with the mucous membrane of the canal itself, will give rise to inflammation in it; this may remedy itself by producing diarrhoea, or it may be attended by very serious consequences.

Again, the retention of the *urinary* excretion is even more pernicious. At first, irritation may be communicated along the ureters to the kidneys, and thus their secreting function be impaired. The urine, when retained, runs rapidly into decomposition, and by absorption causes much constitutional disturbance. If the retention be of *long* continuance, the *urea* itself will be introduced into the circulation, and a typhoid state supervene; coma, delirium, serous effusions containing urea, and other most mischievous results, may thus be excited.

Many maladies also arise from the suppression, or deficient quantity of the *catamenial* discharge.

The sudden checking of *cutaneous eruptions* may likewise be followed by various morbid actions, such as chorea, gout, rheumatism, &c.

Great caution should be observed in putting a stop to discharges that have become habitual: thus long-standing diarrhoeas, or suppuration from ulcers that have been long established, cannot be hastily checked without some degree of danger accruing to the general system.

The omission, too, of periodical blood-letting may operate on the same principle as a cause of diseases; such, for example, as hæmorrhages or inflammations, and especially *nervous* affections.

An opposite exciting cause is that of *excessive evacuations*, either of the blood itself, or of matters derived from it. A moderate quantity of blood suddenly withdrawn, or a large quantity gradually abstracted from the circulation, will materially affect the heart's action; and thus the brain, being deprived of its due supplies, syncope will follow, and even delirium and death may be produced.

If the hæmorrhage is *gradual*, and the patient placed in the *horizontal* posture, all the functions may suffer before the brain is affected, and loss of consciousness induced; so that a state of syncope might arise simply in consequence of the primary cessation of the heart's action—and this would be called *cardiac* syncope. But if the patient were placed in the erect position, and a large quantity of blood rapidly taken from the arm, the brain, not receiving its proper quantum, would be instantly affected, and soon react upon the heart; or the function of the former being suspended, the function of the latter would cease also. The loss of consciousness, or fainting, may exist while the heart is acting well, and then it would be termed *cerebral* syncope, but generally the cerebral and cardiac are combined.

Fainting may arise also from removal of blood from one *part* of the body to another, without the actual removal from the whole system; thus, for example, Dr. Arnott found he could produce syncope by removing pressure from a limb by means of an air pump; in this case the blood was determined, or, as it were, drawn to and detained in the limb, so that the quantity in the *rest* of the body was diminished. Another instance of fainting from sudden removal of pressure, is seen in that which follows the too rapid removal of fluid in tapping for ascites, without artificial pressure being at the same time adopted.

Similar depressing effects may arise from excess of other evacuations, as well as from abstraction of blood—thus purging, profuse sweating, &c., may produce syncope.

Losses of blood, &c., are also followed by a kind of feverish *excitement*, that may, without caution, be mistaken for inflammation; it is, in reality, only nervous reaction, and is distinguished by the absence of *permanence* in the symptoms, and also by the effect that change of posture produces. In the irritation of inanition, sudden alteration of position will induce faintness, but this is far from being the case in true inflammation. There is also a peculiar thrilling character of pulse in nervous irritation.

Another important exciting cause is *temperature*. Extremes of heat and cold are directly destructive to life. Heat coagulates the albumen; and thus the vessels being obstructed, the part must die. Cold below 32 degs. (Fahrenheit) freezes the water of the fluids, and thus causes death. These modes apply to *local* action, and may be called *chemical*. Extensive burns and scalds produce death by the violent shock effected upon the whole nervous system—they cause depression.

But a more moderate degree of heat always produces *excitement*. Thus, a hot air-bath quickens the pulse, occasions headache, throbbing of the arteries, &c. A heated room may even so far excite the circulation as to determine apoplexy. Heat applied to the spinal column often causes faintness, giddiness, sickness, &c., and, indeed, sometimes coma.

Intense cold exercises a directly *sedative* influence. It operates probably by driving the blood from the surface of the body into the deeper parts, and among the rest into the *brain*, causing its congestion; and hence arise drowsiness, insensibility, and death.

Severe cold may prevent the blood from undergoing its usual changes in passing from the arteries into the veins. This was found to be the case in some experiments made by Sir Astley Cooper on kittens.

Moderate cold applied to the surface of the body for a short time, excites capillary action, and thus operates as a stimulant. If applied for a longer period the capillaries become congested, the blood stagnates, and a red or blueish colour is the result; but if the influence of the cold extend more deeply, the small *arteries* become affected, and the blood not passing through them, the surface becomes *pale*.

Indirect effects of cold are irritation and inflammation. If a limb has been exposed for some time to cold, and is afterwards restored, the vessels are excited to increased action, which will be in the ratio of the cold applied, and inflammation may result. The object, in such a case, would be to *moderate* the reaction; whereas, if the cold has produced a lasting *sedative* influence, our aim must be to *stimulate*.

We generally find that *external* cold produces *internal* disease; for example—a person gets wet feet, or is exposed to cold in other ways, and shortly after suffers from sore throat, pleurisy, pneumonia, diarrhoea, or rheumatism, &c. We may ask, how is this effected? Some suppose that it is the result of a *sympathetic* action, just as we see in the production of laughter, by tickling the feet. But I do not think this explanation at all satisfactory, for the disease produced is by no means necessarily in *proportion* to the amount of sensation occasioned by the application of the cold. A person may experience much pain from the exposure to cold, and yet not contract any malady whatever as the result of such exposure. The

effects upon internal organs must be attributed to the contraction of the superficial capillaries, whereby the blood they contained is impelled to the inner parts. Now, if the capillaries of any internal organ or surface be weaker than those of another part, it is clear that an increased quantity of blood being sent into them will cause *them* to become congested, and thus the foundation of further mischief is laid. One of the best methods of strengthening the capillary system, and thereby fortifying it against the injurious influence of cold, is the daily use of cold water, by sponging the surface, or going into a shower or plunging bath; certain precautions must of course be taken in particular cases.

We now come to the consideration of the *non-cognizable* causes of disease, or those of whose existence we have no knowledge, excepting by the effects produced. These are *endemic*, *epidemic*, and *contagious*.

1st, *Endemic*. By endemic diseases we understand those affections that are peculiar to certain districts or localities. Thus, for example, we know that in certain marshy districts ague is prevalent, and that persons residing there are constantly subject to its attacks, and also that new settlers in such districts are sure to suffer from it, but that if these persons remove into a neighbourhood of a different character, they cease to be affected by the disease. So, again, we find that the inhabitants of valleys are frequently sufferers from bronchocele or goitre, whereas persons living upon the mountains surrounding the valley may be entirely free from the malady. Now we conclude, and naturally, that in both these instances of ague and goitre there is some peculiar cause existing in the several localities where the diseases arise. What, then, is the *nature* of the cause? There is no doubt that ague depends upon the character of the *air* that circulates from marshes, or, in other words, it is an *aerial poison*. If the marshes are thoroughly *drained*—the ague ceases, this proves the marsh to be the cause; and that the air is the vehicle of the poison, is proved by the fact that the affection prevails chiefly in the parts *to* which the wind blows, and is diminished in the parts *from* which it proceeds. It is *heavier* than common air; this is shown by the observation, that parties living in the *upper* rooms of a house suffer *less* than those residing in the *lower* rooms—because the greater weight of the poisonous air causes its gravitation towards the surface. I shall proceed to mention a few of the circumstances affecting this species of poison in the next lecture.

REMARKS ON PLACENTAR PRESENTATION.

By CHARLES CLAY, M.D., Member of the Royal College of Physicians, London; and Lecturer on Medical Jurisprudence, &c., Manchester.

I READ the remarks of Dr. Robert Lee, in his Clinical Reports of Midwifery (vide *Lancet*, June 4th, 1842), with considerable interest, and agree with the Editor of that Journal, that an accumulation of well-attested facts (the result of long experience) would be of infinite service in advancing every branch of medical science. This remark is particularly applicable to midwifery. In the article alluded to, Dr. Robert Lee gives the result of treatment in twenty-three cases of uterine hæmorrhage, arising from placentar presentations, and of which ten proved fatal: this is *certainly* a *serious mortality*, and calls for further inquiry. On referring to the result of my own practice, I find not more than six fatal cases out of forty-two, two of which were phthisical, and four had been suffering from free hæmorrhage for a considerable time before my arrival, and were, in fact, sinking. This difference wants accounting for; and I trust I shall be enabled to do so satisfactorily, without calling in question the plan pursued by so able a practitioner as Dr. Robert Lee, particularly as my own plan is similar in principle, varying only as to the time of its application; and in giving it publicity, I cannot suppose I shall offend that talented gentleman, who, I believe, only wishes truth and the best means to prevail, come from whence they will. Of course my conclusions are drawn of Dr. Robert Lee's practice only from the condensed statement in the *Lancet* (not having seen any other). I agree

with him, as well as all the best writers on midwifery during the last century, that in hæmorrhage arising from placental presentation, artificial delivery must be resorted to; but I do not agree with either him or them, that this step should be taken *at once in all cases*, when such a state of matters is ascertained. My reasons for advancing this position will be shown shortly, and will rest mainly on the grounds stated in Dr. Robert Lee's own words:—"Every practitioner knows that the operation of turning should be performed in such cases, when the flooding becomes profuse, and the orifice of the uterus dilatable. But in some cases the orifice remains so rigid, as to render the introduction of the hand into the uterus impracticable, while a discharge of blood is taking place sufficiently great to endanger or destroy life. There are no cases more embarrassing to the accoucheur than these, and none in the practice of midwifery attended with greater hazard."

These are facts no person at all conversant with midwifery will for a moment question; and *where the os uteri is dilatable*, there can be but one opinion, *that artificial delivery should be attempted without loss of time*. But I very much question the propriety of at once attempting delivery in every case where such circumstances exist, more particularly where there is a decidedly thick, rigid, and unyielding os uteri; in this, the success of my own practice bears me out, and I think the cases cited by Dr. Robert Lee fully confirm my views on this important question. I have scarcely ever witnessed a case of hæmorrhage from placental presentation with a thick, unyielding, and rigid os utero at the full period of utero-gestation—such rigidity, thickening, and unyielding state of the os uteri, invariably accompanying cases of uterine efforts, when *premature*, at least with very rare exceptions; where such do occur, they fall properly under the same line of treatment as a dilatable os uteri at the full period of utero-gestation. On these grounds, I believe, the best practice is to bring the case as near the full period of gestation as possible, the nearer approach to which occasions a more dilatable state of the uterine orifice, and a fatal result less probable. It is well known, that in cases of placental hæmorrhage the immediate cause is the tearing asunder of the vessels in the placenta by uterine action. If this circumstance takes place prematurely, or, in other words, before the os uteri is disposed to be dilatable, it is the manifest duty of the practitioner to allay the uterine action if possible, not by proceeding to delivery—which, if such be attempted, from the opposition met with in the rigidity, &c., occupies a large portion of time, during which the prostration of strength and loss of blood are often too extreme to be remedied; thus a fatal result is the consequence. How, then, is the uterine action to be allayed? I have not the least hesitation in stating, when such occurs prematurely, a powerful opiate will not only arrest the uterine efforts, but, as a natural result the hæmorrhage will immediately (at least in most cases) cease, and the case in all probability go on uninterrupted to the full period of gestation, when the os uteri is sufficiently dilatable as to offer no serious obstruction to artificial delivery. I have had many cases where these circumstances occurred in the seventh and eighth month, which, in consequence of the opiate treatment, have accomplished the full period of gestation afterwards.

Interference by turning in premature cases can only be justified in extreme cases, as, after a long-continued hæmorrhage, great prostration of strength, and the patient's sinking; in other respects than these, I am of opinion it is an injurious practice. In respect to the opiate, I should always give a large dose, the least timidity in this respect adds to the mischief. 80 minims of the tincture, or from half to two grains of the crude opium is the least to be effective, and if necessary to be repeated. Of the seven cases published in the *Lancet*, of June 4th, in illustration of Dr. Robert Lee's paper,

- No. 1.—Premature.. Rigid os uteri.. Fatal.
- 2.—Premature.. Rigid os uteri.. Fatal.
- 3.—Premature.. Rigid os uteri.. Recovered.
- 4.—Premature.. Little dilatable Recovered.
- 5.—Not stated.. Rigid.....Recovered.
- 6.—Not stated.. Dilatable.....Recovered.
- 7.—Premature.. Very rigid.....Fatal.

Of the above number, two are not stated as to the period of gestation, Nos. 5 and 6; of the remaining five, three are fatal cases—all rigid uterine orifices; only one case of decided rigidity (No. 3) recovered; whilst the two dilatable ones recovered, although one was but slightly so. This evidence is decidedly in favour of my views; and I am only sorry that I have not the particulars of all the twenty-three cases alluded to before me. The late Mr. K. Wood, of Manchester, a very able and well known obstetric practitioner, and lecturer on midwifery, always recommended, where a possibility existed, "*that every means should be adopted to bring such cases as near the full period of utero-gestation as possible*," an opinion which I have invariably acted upon for twenty years with no small advantage; and I feel convinced that the ultimate fatality would be very considerably lessened by its adoption. From short notes I will state two cases illustrative of the treatment I have been recommending.

CASE 1.—Mrs. W. L—s, of very delicate constitution, æt. 37, was pregnant for the fifth time; she had always gone to the full period of utero-gestation previously, and was between seven and eight months advanced in the present pregnancy—(I should state, that at her second labour she had the placenta attached partially over the os uteri, when no hæmorrhage of any extent occurred, being at the full period of gestation). This fifth time of pregnancy, having been exerting herself freely with one of the elder children, a pain like labour seized her, with a slight flowing of blood; about nine o'clock at night she went to bed; pains continued to occur, with more or less hæmorrhage in proportion to the severity of the pains, and at intervals of about a quarter of an hour, till near midnight, when feeling alarmed at her ghastly appearance, the husband came for me. On examination per vaginam, I found the os uteri open to the extent of rather less than half-a-crown, with the placental mass occupying the whole open space. The edge of the uterine orifice, rigid, thick, and perfectly unyielding. From a knowledge of the time wanting to complete the period of utero-gestation, I judged it prudent not to attempt artificial delivery, unless the case assumed a greater degree of severity. I gave her two grains of solid opium, enjoined quiet, a recumbent position, cool toast, water or lemonade drinks, and went myself into another room, after plugging the vagina, intending to wait and see what effect the opiate might have. Returning to the patient's room in half an hour, I found she had had one pain immediately after the opiate pill as strong as before, and a second very slight one, accompanied with very little hæmorrhage, just as I entered the room, which convinced me that the opium was having the effect of allaying uterine action, and with that uterine hæmorrhage. I left her for another half hour, after the expiration of which, I found no pains had occurred. I then absented myself from the room a full hour, and then finding all quiet, and my patient in a sound sleep, I left the house, with strict injunctions to be sent for if any pains or hæmorrhage occurred, at the same time ordering the house to be kept quiet, in order that she might sleep as long as possible. Not hearing from my patient, I went at ten next morning, found her still sleeping; she had, however, been awake, expressed herself very comfortable, and went to sleep again. I saw her again at four, p.m.; she was awake, quite free from pain, felt quite well, with the exception of feeling a little weaker, and a slight sensation of sickness. After two days' more close watching, I discontinued my visits, cautioning her, before I left, against any exertion in future, at least till her confinement was over; and I heard nothing more of the case for six weeks, when I was again sent for, she being in labour; free hæmorrhage accompanied every pain. I found the os uteri quite dilatable, and the placenta attached all round the os uteri; artificial delivery was resorted to, and accomplished without much difficulty. Both mother and child did well afterwards.

CASE 2.—Eliza D—, æt. 40, also of a very weakly habit, sent for me in haste. I found great hæmorrhage occurring every pain. She stated herself a month short of her full time of pregnancy. Her countenance was perfectly bloodless—it was

her sixth pregnancy; she had been lifting a heavy weight, to which she attributed the present attack. On examination per vaginam, the os uteri was open to the extent of half-a-crown, very rigid, and thick at the edges, without any disposition to dilate, and had a very hot feel when touched with the finger. I considered artificial interference in delivery uncalled-for at present; and, in lieu thereof, gave 80 minims of the tincturæ opii; plugged the vagina, and waited half an hour, on the expiration of which I found the pains much the same, I then gave her two grains of solid opium; in another half hour the pains abated fast, and my patient showed great disposition to sleep, which soon after came on profoundly. I waited another hour, when, finding all quiet, I left the case, with cautions to be sent for if any pains occurred. The next day she remained quite free from pain—very drowsy; the plug was removed; the bandage ordered to be kept well applied; I heard nothing more of the case till upwards of three weeks after, when labour came on with pains, accompanied with hæmorrhage; the os uteri, however, was thin and easily dilatable, and the placenta attached to about three-fourths of the uterine orifice; artificial delivery was easily accomplished, and though she was of very reduced constitution, and had lost much blood during the first attack of hæmorrhage and during labour, yet both she and the child did well, and are still living. She has had three children since, but no placental attachment to the os uteri either before or since.

These cases are sufficient to show the safety of the opiate treatment in such cases, *the grand secrets being, the deferring of manual operations to the latest period possible, and bringing the case as near to the full time of utero-gestation—when artificial delivery is more justifiable, but which is very questionable in very many of these cases—when uterine action comes on prematurely*. I feel confident the opiate plan should not be lost sight of, and it is likely to promise a less fatal result than is shown by other modes of treatment. In the second case, eighty minims of tincturæ opii failed in producing the desired effect (as it often will); I always prefer the solid opium (in pill simple) that is uncombined with any other substance; it is less likely to produce sickness and vomiting, which a large dose of the tincture very often does. The narcotic effect of the solid opium (when it is good) is far more certain. In such cases, I never neglect to apply a bandage of considerable breadth over the uterine region; stimulants and heated liquids of every kind to be carefully avoided. Even the tattling gossips with their thousand-and-one remedies kept at such a distance, that their amusing stories and antiquated recommendations may do no mischief or disturb the required repose so necessary to the well-doing of the patient in cases so critical and fraught with such great danger.

INTRODUCTORY ADDRESS TO THE PHRENOLOGICAL ASSOCIATION, 1841.

By JOHN ELLIOTSON, M.D., F.R.S.

DR. CONOLLY in the Chair.

"Such patch-work systems of conjecture and speculation are fortunately destined, by the immutable and eternal laws of truth, to last but for a season. Craniology has almost lived its little hour. In this city we are certain that, with the absence of Dr. Spurzheim, and the introduction of some other novelty, it will be very soon forgotten."

Such were the words of *Blackwood's Edinburgh Magazine* in April, 1817, twenty-four years ago, and yet are we all assembled here this day! "Long before this time we should have looked for Gall's craniological death," said the *Edinburgh Review* in January, 1815, twenty-six years ago. Gall has, alas! paid the debt of Nature, but his craniological life is now more vigorous than ever; it daily increases in vigour, and can never end.

"That Drs. Gall and Spurzheim," continues this review, "should have brought over any of the better informed in the island, particularly from among those with whom Anatomy and Physiology are either favourite or professional pursuits, into a belief of any of the amazing absurdities they are bold

enough to teach, is, we should hope, a thing really impossible; there is nothing, indeed, in the shape of reasoning, calculated to mislead in their whole writings, not one clever sophistry to captivate, nor even an occasional successful induction to redeem; nothing but a perpetual substitution of assertion for demonstration, and conjecture for fact. We look upon the whole doctrine taught by these two modern peripatetics, anatomical, physiological, and physiognomical, as a piece of thorough quackery from beginning to end; and we are persuaded that every intelligent person, who takes the trouble to read a single chapter of the volumes before us, will view them precisely in the same light. There are a certain number of individuals, however, in every country, who are destined to be the dupes of empirics."

"In our opinion," said *Blackwood* in 1824 (No. 72), "fool and phrenologist are terms as nearly synonymous as can be found in language"—"these infernal idiots, the phrenologists." (No. 76.)

Happy, indeed, is it for us that we are such dupes, such fools, such idiots. Happy is it for us, as lovers of truth and of the happiness of all living beings, to know that the number of phrenologists throughout Britain and the continents of Europe and America can no longer be easily reckoned and are rapidly increasing; that the best informed, of both sexes daily join our ranks—of every religious, of every philosophical, and of every political opinion—Professors in Universities, and lecturers—authors of every kind, and reviewers. The majority of medical shops present a phrenologically marked head as a conspicuous ornament, and I rarely enter a house in which one is not found—"That plaster head," which the *Edinburgh Review*, in 1826, said "it expected long ago would be turned into toys for children, and this folly of Phrenology consigned to that great limbo of vanity to which the dreams of Alchemy, Sympathetic Medicine, and Animal Magnetism, had passed before it."

Gall foresaw this great change. In the preface to his third 4to. vol., published in 1818, and to the sixth 8vo., published in 1825, he beautifully says—"I have always been conscious of the dignity of my researches, and of the extensive influence which my doctrine will one day exert upon human knowledge: for which reason I have remained indifferent to all the good and evil which might be said of my labours. They were too far removed from received opinions to be liked and approved of at first. A knowledge of them required deep and continued study; but every one was anxious to pronounce upon them, and every one came with opinions and views, according to the measure of his intelligence. All the doctrine is now consecrated to the public—judgment cannot long remain doubtful—personal feeling will disappear—the passions will calm, and criticism will have only its due weight. Posterity will not fail to contrast the point at which I started with that at which I stopped. My adversaries have but too distinctly displayed the state in which the various objects of my labours were, for it to be difficult to know what improvements these have derived, and will derive, from my discoveries—what progress in the comparative anatomy, physiology, and pathology of the nervous system—what a fruitful source of irrefragable principles, for philosophical studies, for the art of turning the dispositions of individuals to the best advantage, for the art of directing the education of youth—what valuable materials for criminal legislation, based upon a complete knowledge of the motives of human action—how History will change in the eyes of those who know how to appreciate it according to the predominant inclinations and faculties of the personages who have played the chief parts in it.

"The foundation of this useful doctrine being laid, it must be as immovable as the materials, the facts, of which it is constructed."

And this is the secret of the present great reception of Phrenology—its truth. It has not captivated as a new and beautiful object, not as an unexpected source of fresh pleasure, not as a fashionable folly, not as a new means of gain and worldly advantage, not as a new ladder by which the cunning or ambitious may ascend to the object of their desire; it was long despised and rejected; brought ridicule, contempt, pity, coolness, severe

censure, determined hostility, and bitter injury, according to the turn of each man's mind, upon those who ventured to express themselves in its favour. Religious persons branded them with the crime of impiety; because, to say that the brain is the organ of the mind, is to assert Materialism, and to assert Materialism is to assert Atheism. Moral persons branded them with depravity, because, to assert that there is a distinct organ for every distinct impulse of our nature, is to assert Fatalism. Metaphysicians pronounced them totally ignorant of all mental philosophy.

Cabanis and Professor Richerand declared that all instincts were situated in the bowels; and Professor Broussais said that Gall was the only modern who thought otherwise. Professor Thomas Brown (*Edinburgh Review*, April, 1803), trusted that his readers were already sufficiently convinced that the principles on which Dr. Gall had founded his theory were erroneous, and considered it unfortunate for Dr. Gall's theory that he had entered into the detail of it with such minute exactness, as it enabled every one too easily to compare its predictions with the skulls of those around him; and Professor Dugald Stewart, in his preliminary dissertation to the Supplement to the *Encyclopædia Britannica*, exclaimed, "Is there no Arbutnot now, to chastise the follies of our modern craniologists?" Zoologists would not hear of the brute creation being more than mere machines, the creatures of instinct—of their possessing, like ourselves, memory, judgment, and will. "To believe them partakers of certain inclinations and faculties in common with us," said Gall, "was a heresy." Zootomists declared the brain of the orang-utan to be precisely the same as that of man—the brains of all mammalia to contain all the same parts as the human; and, therefore, no difference to exist which can explain the difference of human and brute manifestations—no differences of absolute and proportionate size of the convolutions on the surface of the brain.

Anatomists contemptuously rejected the whole of Gall's discoveries in the brain and other portions of the nervous system; and some protested that the brain was an unorganised pulp. Some physiologists scorned the fact of the brain being the organ of the mind; others, who admitted this, scorned the idea of different portions of the brain having different offices—"Physiologists," as Gall says (8vo., vol. 2, p. 63), "becoming the dupes of the ideologists, because these, in their metaphysics, contended that the soul is simple; and the physiologists complaisantly, therefore, established that the brain is simple, and were horrified at the idea of a plurality of organs." They consequently refused to listen to the statement, that, according to the size, absolute and relative, of the various portions of the brain, was, other conditions being equal, the strength of particular inclinations and intellectual faculties in both brute and man. Others, whether of this number or not, denied that the shape and size of the skull bore any relation to its contents—the brain, and therefore would not condescend to make observations on the men around them. Professor Ackermann declared that the variety in the shape of skulls arose from air, which penetrated into the cells of the bone. The most unblushing was a surgeon and lecturer in a London Hospital, a professor in our Royal College of Surgeons, and professor at this moment in the University of Edinburgh—Sir Charles Bell—who, in 1823, declared, in the Transactions of our Royal Society, that Gall's strictly inductive method is the most extravagant departure from all the legitimate modes of reasoning; that Gall, without comprehending the grand divisions of the nervous system—without a notion of the distinct properties of individual nerves, or having made any distinction of the columns of the spinal marrow—without having ascertained the difference of cerebrum and cerebellum, had proceeded to describe the brain as composed of many particular and independent organs, and to assign to each the residence of some special faculty: and all this Sir Charles Bell repeated in 1836. Physicians protested that the brain had nothing to do with insanity, Pinel considering that this disease generally originated in the stomach, and thence extended itself; Fodéré, that the brain was no more the seat of insanity, than of the in-

clinations, or intellectual faculties. So the Abderites pronounced Democritus beside himself when they found him dissecting in order to discover the cause of insanity.

But this was not all. To reject was insufficient: it was advisable to misrepresent. Cuvier informed the world that Gall pretended that every sentiment and inclination, and every particular modification of our faculties, was situated in a particular region of the brain, and might be judged of from the exterior of the cranium; whereas Gall says this of faculties only essentially distinct, not of their endless modifications; and he remarks, that to have done as Cuvier represents, would have been as absurd as to have contended for the existence of as many stomachs and as many eyes in every person as there are modifications of digestion and vision.

Some told the world that he considered all large heads as indicative of great talent. To which he replied, that the examination of ten heads would be sufficient to convince any one that the most voluminous brains, if large only from the great development of the posterior and lateral parts, are possessed of no great intellectual capacity.

Others related that he derived his views of the functions of the different parts of the brain from the previous study of its anatomy. Dr. Bostock, in even the last edition of his Physiology, says that "Drs. Gall and Spurzheim, in consequence of their accurate dissection of the brain, and their modes of separating its different parts from each other, were led to conjecture that these parts were appropriated to distinct mental faculties." Whereas the reverse is true. In the very introduction to his 2nd vol. 8vo., Gall says, "the knowledge of functions has always preceded that of the parts. Thus, as I have elsewhere said, I have made all my physiological discoveries without the assistance of the anatomy of the brain, and these discoveries might have subsisted for ages without their conformity with the organization of the brain being known." And in the 3d vol.: "I owe almost all my anatomical to my physiological and pathological discoveries."

Some pretended to believe that he taught that the faculties resided in the bony substance of the skull itself, and not in the substance of the brain within the skull; others, that he professed to judge of the brain from the skull, at all ages, and under all circumstances; whereas he expressly says, "in health, and before the arrival of old age."—8vo., vol. 10, p. 394.

Others pretended that he pronounced upon the past and future actions of men, and not upon their natural dispositions and powers only. "If," replies he, "I observe the external mark of an organ well developed in any person, I am able to say with certainty that in this man the disposition of the faculty which belongs to this organ is stronger than the disposition of his other qualities. But I am ignorant whether circumstances have permitted this same individual to give himself up to what this prevailing disposition inspires him with. Birth, situation, education, laws, custom and religion, have the greatest influence upon occupations, on the perfection and exercise of the organs, as well as upon the moral character of the man. It would, therefore, be rash to conclude that the actions of an individual correspond with the faculty whose disposition is predominant. On seeing the organ of Tune or of the Mechanical Arts much developed, we can affirm that the individual has a great disposition or talent for music or the mechanical arts; that in his youth he must have had more success in those arts than his companions; and that probably still, after the duties of his station are over, they are his favourite occupation; but I cannot say that he is really a musician or a mechanic. If the predominant faculties are inclinations capable of leading to injurious or illegal acts, I abstain from judging, because I admit that healthy and rational beings are able, through noble motives, and the effects of good habits, to overcome their desires, and not give way to them unlawfully. On this account I do not addiet myself to such inquiries in my social relations, especially when no good could result from them."—Vol. 1, p. 109.

Others pretended that he absolutely taught fatal-

ism, and the irresistibility of action. In France the accusation was made, "that, although he was there more circumspect, he had taught the irresistibility of action in Germany." The following was his reply: "I value my doctrine too highly to change or mutilate it in favour of the prejudice or opinion of any people whatever. I neither speak nor write for Germans only, nor for French only. As an observer of nature, my object is to explain and defend a doctrine which may be useful to all mankind, be compatible with all forms of government and with true morality, and which at all times may be applied to the wants of humanity, since it is derived from the nature of things. But I at the same time affirm that I have never taught the irresistibility of actions, and that I have always professed moral liberty. At Vienna, and throughout my travels, I had auditors of all ranks; many persons of religious orders—vicars, pastors, bishops, tutors; even many sovereign princes have condescended to hear me explain the principles of my doctrine. But none of these personages perceived the least danger in them to morality or religion. Many of my auditors have published works which justify my conduct in this respect."—Vol. I, p. 313.

At length, in January, 1802, Gall being in his 45th year, and enjoying high and extensive practice in Vienna, was prohibited from teaching his science by an edict of an Emperor of Germany, Francis I., that wise man, who was reported to have declared that he wanted no learned men in his dominions. "To show his profound respect and implicit obedience to the orders of his Majesty" he had discontinued his lectures a few days previously, on the 29th of December, upon receiving the first intimation that this high command was about to be issued. He presented a petition and remonstrance to the provincial Government of Lower Austria against the edict, stating that his lectures had been delivered for five years in Vienna in the most open manner, and attended by foreigners from all countries, and by all ranks of the inhabitants of the city; and that, two years before, the manuscript of them had received the imprimatur of the censor, as he at that time intended to publish them. He urged that his conduct had been blameless; that he had never drawn upon himself the attention of the police, by word or action, by secret combination or intentional selection of hearers, nor abused in his lectures any privileges which physicians enjoyed; that ladies of the higher class only, and those, with four exceptions, married, each of the four being accompanied by her mother or aunt, were occasionally his auditors—and that the presence of ladies was in his eyes desirable, because he often seized the opportunity of laying before them important instruction concerning the physical and moral education of the young; that in all ages truths entirely new, and even truths better demonstrated, have been thought to threaten the existence of all previously established principles; that experience has uniformly proved that old and new truths soon cordially combine, and mutually support each other; that opposition to them is only pernicious, and, especially, that obstacles thrown in their way tend only to promote their advancement. We need only reflect (he continued) on the discoveries of the true planetary system, of the circulation of the blood, of the existence of antipodes, on the fate of Galileo and of Wolf under William I., on the introduction of antimony, of bleeding, and of the inoculation of the small-pox,—to be convinced of the truth of these remarks. He showed that his doctrine was founded on indisputable facts, and was in harmony with the opinions of the greatest authorities in medicine, morals, and religion; and that it was capable of great practical application in the treatment of mental diseases, and threw infinitely numerous, great and new views upon social life and history; and that it was not "in the power of himself or any human being to arrest the progress of the science, or set bounds to its circulation,"—a prediction now fulfilled—"and that the enforcement of the edict would destroy his reputation and render useless his collection of human and brute skulls, casts of heads, and wax models of human and brute brains, which had cost him 7,000 gulden, while his preparations for his great work had cost him 15,000 gulden." The result of this peti-

tion was a new order rendering the first permanent; and Gall necessarily left Vienna and the Austrian dominions, never to return, shaking off the dust from his feet on that city, though the poor Emperor, when in Paris in 1815, attempted to atone for his absurdity by personally inviting Gall back to his capital.

After travelling over the continent, and lecturing in a very large number of cities, and before all the learned of the Universities, Gall settled in Paris, and was fated to be persecuted by another Emperor. Some members of the Institute were enthusiastic in their approval of Gall's discoveries; but Napoleon, ignorant as he of course was of the subject, and of everything connected with "divine philosophy"—a man of bloodshed and self-aggrandizement—had during his first visit to Germany received his first impressions from some metaphysical lawyer at Leipsic, who told him that the operations of the soul were too deep ever to be traced. On his return to Paris he bitterly rated those members of the Institute who were enthusiastic in their praises of Gall's discoveries. "This thunder of Jupiter," says Gall, "laid the pignies prostrate. Instantly my discoveries were doatings, quackery, absurdities; the journals lent themselves as the instruments of ridicule, which is all-powerful in France, against the so-called bumps. Napoleon was made to believe that the imbecility of Gall had conceived a bump for drunkenness, and he afterwards boasted at St. Helena that he had greatly contributed to ruin Gall. "J'ai beaucoup contribué à perdre Gall." How, then, under all this personal persecution of the great founder, this determined hostility on the part of writers and official teachers to his science, this ignorance and misrepresentation of it, does Phrenology now stand proudly erect upon the earth? For one reason only—It is true! It has not been advanced by adoption into any great institution of education or of scientific research, not by any already highly estimated writer, philosopher, or practitioner. It is unknown within the walls of Oxford and Cambridge, and every British and almost every foreign university; unknown in all British and nearly all foreign medical schools; unknown in all our ancient, and in almost, but not quite, all our modern lunatic asylums, as well as almost all those of other nations; unknown in hospitals, unknown in nearly all works upon physiology, zoology, medical practice in general, and on insanity and other diseases of the brain in particular. Go to the Royal Society, you will not find it there; look into the Philosophical Transactions, and you will see them disfigured by Sir Charles Bell's lamentable injustice, and by Professor Tiedemann's untrue declaration, that the negro has a skull and brain equal to the European—untrue on his own showing, for he gives careful measurements and weights of European and Ethiopian brains, and measurements of the capacity of European and Ethiopian skulls, which show a decided superiority of the European. Yes! though his assertion, that the opinion of the negro's skull and brain being smaller than the European, is ill-founded, and entirely refuted by his researches in direct opposition to the results of his own estimates, the Royal Society, and in its train half our scientific men and journals, adopt and propagate both facts and inferences, says Dr. Andrew Combe, as literally correct and of vast importance.

Go to our Hunterian Museum, entrusted to the College of Surgeons, hear the lectures upon it, talk with those of the place—Phrenology is unworthy of such a place and such men. Go to the Zoological Society, where phrenological facts are innumerable and incessant—not one is ever noticed. Inquire about the examinations by the College of Physicians and of Surgeons, and by the Company of Apothecaries—Phrenology, or anything connected with it, is never breathed, nor is it likely that a single examiner has the slightest acquaintance with it. Go to the British Association of Science—in its report on the physiology of the nervous system, read in 1833, in which Gall's name is not once mentioned, the compiler gravely informs the assembled savans, that there does not exist any conclusive evidence for referring separate faculties, or moral affections, to distinct portions of the brain; and the establishment, by Sir Charles Bell, of the ancient

doctrine, that there are always separate nerves for sense and motion, and which is merely a little illustration of Gall's great principle of distinct offices of distinct parts of the nervous system, he calls the most important discovery since the time of Harvey: a discovery, I may remark, which takes away a great argument against Phrenology from Dr. Roget, who presumed that the same part of the brain would serve for the memory of words and the memory of things, or for the idea of figure and of size, because "the same nerve performs the office of volition and sensation, and no anatomist has been able to separate the different bundles of fibres which convey each impression."

Read the Bridgewater Treatises, written expressly to show the wisdom, the power, and the goodness of God, and there you will find no phrenological illustration of His power, His wisdom, and His goodness, although the brain and its functions, viewed phrenologically, are the most sublime and wonderful objects of nature.

Read the works on Physiology by Richerand, Magendie, Tiedemann, Rudolphi, Müller, Mayo, Bostock, and you will derive no phrenological information—in some, find it ludicrously opposed.

The vested rights of Indolence not to be disturbed by demands upon it to examine into anything new or to shake off old errors and fit on new truths; and the vested right of Pride not to be insulted by suggestions of new knowledge, superior to that already complaisantly possessed, must be sacred from the profane touch of what that great innovator, Time, brings forth. Thus, those institutions, and those men whose duty it is to lend a helping hand to all knowledge, and all that can adorn mankind, too often lend no aid; and, if not by their hostility, at least by their silence, unfavourably settle the minds of those who look up to them as authority. Oh! that the world could consider how much is really due to authority; that they would see that they usually give distinguished men credit for far more knowledge, integrity, and ability than they deserve! The more a man excels in any one thing, or any department of one thing, the less qualified is he generally to judge of others. In matters which come home to people, they give others credit but for limited excellence. They do not trust the same medical man for every complaint. They go to a physician or a surgeon. If to a physician, they go to one fancied well skilled in affections of the lungs, and would not think of consulting him for their stomach. They go to another on account of their stomach, and would not thank him for his opinion if they have a cough. Nay, whatever the disease may be, if it occurs in a child, they will consult no one who has not devoted himself entirely to women and children. Yet, if a medical man be famous for anything, whether a fashionable physician or surgeon, a pure anatomist, a mere mechanical operator, nay, though he be totally undistinguished, but talks positively, his opinion is implicitly taken against Phrenology, Mesmerism, or any other matter on which they are not professionally consulting him, and of which he may be profoundly ignorant. An anatomist may know almost nothing of physiology or practice; a physiologist may be a poor anatomist, and know almost nothing of practice; a practitioner may be neither an anatomist nor physiologist; a surgeon may know nothing of philosophical anatomy, nothing of physiology, and nothing of medicine, whether or not, though practising it extensively, like a late celebrated surgeon, Sir Astley Cooper, he, before his pupils, thank God every year in his lectures that he knows nothing of it. Nay, some who have credit for acquaintance with a single department of their profession, have not a full and sound knowledge of it; and, having learnt only a certain amount, and that by rote, without reflection, are incapable of judging of improvements in it. Again, some who are competent to judge, are not to be depended upon for fairness of opinion; so little is moral education thought of in training the child or the young man—the cultivation of modesty, candour, and integrity in its numerous and minutest ramifications.

Unfortunately, men not only possess, but are strong partisans of, far more opinions on all subjects than they can give a good reason for. "Notwithstanding," says Locke, "the great noise is made in the world about errors and wrong opi-

nions, I must do mankind that right as to say, there are not so many men in errors and wrong opinions as is commonly supposed. Not that I think they embrace the truth, but, indeed, because concerning those doctrines they make such a stir about, they have no thought, no opinion at all." "Imitation is one of the most powerful and important principles in our nature, causing us to use a particular language, to dress, to live, to behave, nay, in a great measure, to think and believe, nationally and sectionally, if I may so speak, though we may fancy that in all these matters we act of our most excellent free will and sound unbiassed judgment, founded on full and positive knowledge. The force of imitation is immense in the young. It soon compels the child to talk the language of those around, and do, as far as possible, all they do. Without this impulse, little advance would be made. With this impulse of imitation, there soon cooperates that of habit, and then that of belief. What we have done we do more easily, and, moreover, assume an inclination to do again; and what we witness, or have communicated to us by others, we gradually acquiesce in, and are reconciled to, objection and repugnance declining by repetition of the facts or opinions, till ugliness may be confounded with beauty, vice with virtue, absurdity with sense, and what is proof less with what is certain."—(See my *Human Physiol.*, p. 974.)

Thus, political, religious, and many other views, run in families and sections; and where one individual differs from those around him, the reason is too frequently to be found in his having fallen into a line of life, or among associates, distinct from his family, rather than in the acquisition of greater knowledge and the exercise of a sober judgment. This influence upon the young ensures the permanence of error for two or three generations. The old teacher is immovable and impenetrable, and he fixes and solidifies his young hearers, who, in their turn, afterwards do the same with theirs, though far less effectually, because of the force of the external stream of improvement which flows in upon them: and it is not till these have passed away, not till a few successions of men have died off subsequently to the first promulgation of a new truth, that it is received as an established thing, which it enters into no man's head to doubt. In Harvey's time, no man who had attained his fortieth year, when the circulation was promulgated, admitted its truth to the end of his days; and for two or three generations, those who yielded to evidence were nick-named circulators, as we are nick-named craniologists. Gall has recorded the influence which was exerted upon the rising generation in regard to his discoveries: "One could judge how much the new physiology of the brain disturbed the heads of the schools of medicine, by the extreme caution of the students. Some, in speaking of my discoveries, blamed me, and paid honour to their professors; others appropriated my ideas, without daring to mention the source of their treasures; others published extracts from my courses, but anonymously; others were expelled from their learned societies, for having declared themselves partizans of the German doctrine." (Vol. ii., p. 32.)—Hence the slow progress of Phrenology, though crowds attended Gall's lectures wherever he went; though here and there a distinguished man spoke well of him; though Loder said that his anatomical discoveries would be sufficient to immortalise his name, and both Loder and Reil declared them to have surpassed what they thought one man could discover in his whole life; though Hufeland published his conviction, that Gall should be regarded as one of the most remarkable phenomena of the age, and his doctrine be placed among the most important advances in our knowledge of nature; and though Corvisart enthusiastically praised and patronised Gall both at court and among the learned.

The progress of Phrenology in this country has been silent. The lectures and writings of Dr. Spurzheim and Mr. Combe excited general attention to it, and quietly produced conviction among more and more persons, of no authority, indeed, then as medical men, or teachers, or writers of any kind, but endowed with sufficient sense and information to judge accurately, and free from the pre-

judices of teachers, pupils, and active members of establishments. Thus have our ranks thickened, and thus have those who ought to have been the first converts had the subject forced upon them, and they will not, for very shame, be able much longer to boast of their dissent, nor even to remain silent and not profess their conviction. Nothing is more amusing than to hear anti-phrenologists admit points which once they would not allow to be mentioned before them. Professor Magendie, who calls Phrenology a pseudo-science, and classes it with necromancy, says, "The dimensions of the brain are proportionate to those of the head." "The volume of the brain is generally in direct proportion to the capacity of the mind." "It is rarely found that a man distinguished by his mental faculties has not a large head." Professor Tiedemann, in our *Philosophical Transactions* for 1836, says, "There is undoubtedly a very close connexion between the absolute size of the brain, and the intellectual powers and functions of the mind. This is evident from the remarkable smallness of the brain in cases of congenital idiotism, few such exceeding in weight the brain of a new-born child." "The brain of very talented men is remarkable, on the other hand, for its size." The *Edinburgh Review*, without mentioning Gall's name, thus condemns the established mode of dissecting the brain, and inculcates his:—"Even within our own time, although many great anatomists devoted themselves almost exclusively to dissecting the brain, this used to be demonstrated by the greater number of teachers in a manner which, however invariable, was assuredly not particularly useful. It was so mechanically cut down as to constitute a sort of exhibition worth nothing." "Up to this day our memory is pained by the recollection of the barbarous names and regular sections of what was then the duller part of anatomical study, which, although often repeated, left no trace of its obscurity or absurdity." In another number the *Review* gives its testimony to truths which it once stoutly denied.—"In the nervous system alone we can trace a gradual progress in the provision for the subordination of one animal to another, and of all to man; and are enabled to associate every faculty which gives superiority with some addition to the nervous mass, even from the smallest indication of sensation and will up to the highest degree of sensibility, judgment, and expression. The brain is observed to be progressively improved in its structure, and, with reference to the spinal marrow and nerves, augmented in volume more and more until we reach the human brain, each addition being marked by some addition to an amplification of the powers of the animal, until in man we behold it possessing some parts of which animals are destitute, and wanting none which they possess." Gall appeared in Paris and published his work between thirty and forty years ago; and now only is his anatomy taught in our schools. The doctrines of Descartes were not dislodged by Newton's discoveries till these had been published about thirty years; nor were these received into the University of Cambridge—Newton's own University, where he was a fellow and resided—by any other means than a stratagem of Dr. Samuel Clark, who quietly explained them without appearance of argument or controversy, in the form of notes to his translation of Descartes' book, which had been the long established text-book of the jog-trot tutors of the University.

I have mentioned that our greatest obligations in this country are due to Dr. Spurzheim and Mr. Combe; but let us not forget the eminent services of that able and useful man, Dr. Andrew Combe; let us not forget that the *Lancet* and Dr. James Johnson's *Journal* long ago espoused our science. Let us not forget the early services of Sir George Mackenzie, Mr. Simpson, and many other writers in the *Phrenological Journal*, as well as of many writers of small works, of many lecturers and collectors of casts, among the latter of whom Mr. Deville stands *facile princeps*.

In regard to other countries, let us not forget the labours of Professor Caldwell, who has long sounded Phrenology through North America, and triumphantly beaten down its miserable assailants as they presented themselves.

Let us not forget the labours of Professor Otto,

whose writings enforced it among the Danes, and whose fellow-citizen, Dr. Hoppe, at Copenhagen, has probably discovered a new organ.

Let us not forget the labours of a third foreign Professor, now happily among us, Professor Rigoni, of the University of Pavia, through whom the veto upon phrenological works has been removed in his territory of Italy, and several of whose friends and countrymen have of late published works explaining and supporting Phrenology.

The universal reception of Phrenology cannot now be far distant.

No one will long remain ignorant that we have no hypotheses; that Phrenology is a matter not of speculation, but of fact. "All the objections and doubts, of my adversaries," said Gall, "*in toto*, have a radical defect. Craniology and Organology are experimental sciences." "Why do not my adversaries begin by repeating the observations which Dr. Spurzheim and I have made? Why do they not collect facts, rather than contend against me with subtleties derived from their own peculiar mode of considering the powers of the mind and the animal organization?" "Newton declares that he busied himself not with hypotheses—"Hypotheses non fingo." Yet Father Pardies wrote against the experiments, and what he was pleased to call the hypotheses, of Newton.

No one will long remain ignorant that Gall answered all the objections respecting the frontal sinus, and every other point which has subsequently been started, or which ever will be started against him. No one will long remain ignorant of the immensity of Gall's observations. Alluding to himself, he says (Vol. 3, p. 192)—"When a man pursues his researches with perseverance, when he is fortunate enough to continue his observations for 20, 30, or 40 years, under the most diversified relations, upon educated and uneducated persons, upon rich and poor, to repeat them in a thousand ways among the most different nations, and always find them confirmed; when he looks back to the most distant time, and studies the busts, portraits, and engravings of men immortalized by eminent qualities and faculties; when he studies the biography of these men, and follows them from their youth to their death; when he makes himself acquainted with the means by which they advanced, and never finds exceptions, never contradictions, he may with confidence presume that he is in the road of truth." "I have collected innumerable facts, in schools and great establishments of education, in orphan and foundling hospitals, in mad houses, in houses of correction, in prisons, in courts of justice, and even in places of execution; multiplied researches on suicides, fatuitous and deranged persons, have powerfully aided to testify and establish my opinions." "All who have attended our courses of lectures, and read our works, are astonished at the number of my facts."

No one will long remain ignorant that he settled a number of points on which the most correct as well as the most wild notions had been entertained. Hippocrates had said, "men ought to know, that from the brain only proceed pleasure and joy, and laughter and sport, as well as griefs, anxieties, sorrows, and weepings; by it we are wise, and understand, and see, and hear, and appreciate what is base and honourable, good and bad, pleasant and unpleasant. By it we are insane and delirious, experience terrors and fears, partly by night partly by day, and sleeplessness, and ill-timed errors and groundless cares; do not recognize those that are with us, lose our habits, and forget our experience." Yet numerous authors have contended that the brain is not the organ of the mind. Lord Jeffrey assures us that there is not the smallest reason for supposing that the mind ever operates through the agency of any material organs, except in its perception of material objects, or in the spontaneous movements of the body. Lord Brougham gravely says, "that there is strong proof that the mind is independent of the body;" and Dr. Abercromby, "that we do not know whether impressions made upon the nervous fabric connected with the organs of sense are conveyed to the brain, or whether the mind perceives them directly as they are made on the organs of sense." But of these absurdities there must be now an end.

The Doctors of the Sorbonne had declared all brutes to be mere machines, but Gall showed most distinctly, like Charles Le Roy; and others, that the constitution of their minds was the same as that of ours, though endowed with many faculties weaker, and destitute of some that we possess.

He contributed greatly to the universal admission of the fact, that perfection of organization throughout the animal kingdom is commensurate with perfection of the mental qualities. He established a sound view of the faculties of the mind, in demonstrating that memory, judgment, attention, imagination, &c.—the fundamental faculties of metaphysicians, were only modes of other faculties which were really fundamental—a fact of which others had had a glimpse when they taught, ages ago, that there was a memory for things, a memory for words, and a memory for places; and when Pinel showed that persons might be insane, sometimes in regard to their moral faculties, sometimes in regard to their intellectual, and sometimes have only partial lesions of perception, memory, judgment, imagination:—and that the passions and instincts were not placed in the organs of the chest and abdomen, and their nerves and ganglions, as nearly all modern physiologists had pretended, excepting Van Swieten and a few others.

Yet, though he condemned all the speculations of metaphysicians, and showed that what they regarded as fundamental faculties were only modifications of fundamental faculties, he admitted the justice of their observations on those modifications, and wished his disciples to profit by them. By the division, “said he,” into fundamental qualities and faculties, and into general attributes of these, we should preserve the fruits of the labours of my predecessors, and turn them to advantage.”—Vol. vi., p. 434.

No one will long remain ignorant that whoever studies nature with Gall in his hand must become a phrenologist; that Dr. Vimont, who pursued this course with the view of refuting Gall, was presently converted, and produced the most splendid collection of proofs of the truth of Phrenology from the brute creation, which has appeared since the great work of Gall; that Dr. Moreton, examining the skulls of the aborigines of North and South America, with no view to Phrenology, confessed himself, at the end of his examination, compelled to acknowledge that there is a singular harmony between the mental character of the Indian and his cranial developments as explained by Phrenology.

Men will no longer remain unconscious of the phrenological facts which surround them on all sides in the beings which they behold, just as the animals of the forest are surrounded by all the facts of Astronomy, Geology, and Botany, without being aware of one.

No question is more sickening than when we are asked what is the use of any discovery in nature. It is fair to ask what is the use of any human invention; but to ask what is the use of the knowledge of any point in Nature, argues a want of penetration and of elevation of feeling.

Nature is one whole; every part is connected with the rest; every part is in harmony with the rest; the view of a single point is a view of some general law—a view of a portion of a stupendous whole. The study of Nature is, in itself, next to creating happiness, the sublimest, the most satisfying gratification. This is use enough in Phrenology. But the knowledge of any portion of Nature must be calculated to enable us to make further progress, and thus ultimately convert that knowledge to the purpose of increasing happiness. However useless any discovery in Nature may at first appear, we may be sure that ultimately we may make it the instrument of good. It has been asked, in reply to such inquiries, what is the use of a little baby—to grow up into one of us. But the applications of Phrenology are incalculably good. By it we may learn our own natural character with perfect accuracy,—become assured of our defects, and if we see proofs of excellence, ascribe it to our organization, being assured that we did not make ourselves. We may learn the character of those around us, and

thus become assured of what is excellent in them, and see a reason to pity them for their faults. We must see additional reason for strict justice and the warmest benevolence, in the remarkable fact, of the organs of the moral sentiments being placed above all those of the less noble inclinations. We may learn what talents it may be most advantageous to cultivate, and what treatment to adopt with the children committed to our care. We may learn what importance we should attach to the judgment and professions of others, whose rank and situation render them important in the world. Of its application to the comprehension and treatment of insanity, and of its elucidation of many otherwise inexplicable facts in other diseases of the nervous system, I need not speak. Let us remember, with satisfaction, that the best system of education—of true education, and not what usually passes under that name, has been most ably and devotedly promulgated and enforced by one of the earliest British phrenologists, who is here this day; and pardon me, Sir, if I congratulate the assembly that not only your predecessors, Sir William and Lady Ellis, who introduced such admirable treatment of the insane at Hanwell, were phrenologists, but that you have carried out the rational and benevolent treatment of the insane far beyond what the most enthusiastic could ever have deemed practicable. May you overcome all opposition!

I will finish with one more quotation from Gall: “Men take coffee, men eat potatoes, men vaccinate, in spite of the exclamations of the doctors and the profane; the blood circulates in spite of the anathema of Gassendi; the earth turns in spite of the anathema of the Pope; brutes are not automata the more for the decrees of the Sorbonne; the German Doctor's Anatomy and Physiology of the brain subsist, and will subsist, in spite of the efforts of Napoleon and his imitators, and their numerous auxiliaries.”

MR. CARMICHAEL'S CONSISTENCY.

To the Editor of the ‘Medical Times.’

SIR,—In your last number I am charged with inconsistency in advocating, at the annual meeting of the Irish Association, Sir James Graham's heads of a Medical Bill, while I at the same time acknowledged that not one of the objects which medical reformers had in view was adverted to in them. You make the following observation:—“After reading the report, an impression is strong in our minds that the private, we had almost said the improvised opinions of the president, Mr. Carmichael, have misled the Association into one or two steps which it will soon see ample occasion to deplore.”

Now, in direct opposition to this assertion, I can confidently state, that in the various speeches and observations made at this meeting, I was the only person who objected to the provisions of the Bill in question. Those objections are not certainly to be found in the garbled account given of my address in your Journal; but if any one will take the trouble, he may see them in the *Dublin Medical Press* for the 1st of this month.

Amongst the reasons I urged for the expediency of adopting the Cabinet measure, which happen not to appear in your Journal, are the following, which sufficiently evince the *modicum* of approbation bestowed by me on the heads of the Bill:—

This mode of selecting a Council to regulate the profession, although, at first, absolute, on the part of the Crown, leaving but little power afterwards in the Colleges, as a selection is to be made by the Crown of one from five members, returned by each College, effect great improvement in the profession; provided that this Council consist of honest, intelligent, and independent men, who have at heart the respectability of the medical

profession, and the interests of the public; and I feel particularly gratified in seeing that one of her Majesty's principal Secretaries is to be the President. This arrangement will connect the profession more closely with the Government than it has hitherto been, and be the means of encouraging, what I consider the highest department of the healing art, those measures calculated to prevent the rise and extension of disease, usually denominated preventive or political medicine.

Having now finished these hasty observations on the proposed Government Bill, which, although I have shown to be deficient on many important points, yet it advances a considerable step towards those desiderata, which I stated at the commencement of my address to be requisite to the reformation of the profession. But even if Sir James Graham should not be inclined to attend to the lights which must break in on him from various quarters since he announced his intentions, yet we have reason to be grateful for the Bill proposed, which may, if it does not satisfy all, be at least considered as a weighty instalment.

When the Bill comes before Parliament, and the subject is well sifted, it may undergo many useful modifications under the sanction of the Government, for it cannot be considered in the light of a party question; on the contrary, it is one, on the success of which all parties are equally and deeply concerned: yet I will venture to say that, were it not introduced as a Cabinet measure, it would suffer the same neglect and disregard which it has hitherto experienced.

I should wish as strenuously as you do, Mr. Editor, to see quackery extinguished, and would admire greatly the talents of that lawyer or legislator who could frame a Bill to accomplish this great object; but until I see such a Bill, shall content myself with the *wise* provisions contained in the heads of Sir James Graham's Bill to repress empiricism, and encourage licensed practitioners.

But, let me ask you, if the most flagrant instances of quackery are not often perpetrated even by the privileged members of the profession; and how are they to be controlled, except by public opinion?

In conclusion, I have to observe that I am only answerable for my own words, as given in my address, and not for the resolutions of the meeting. “My words are my own, my acts are my ministers,” was the reply of the witty monarch to Rochester. In page 177 of your Journal, the vote of thanks to Sir James Graham follows so closely on the heels of my speech, that any person would suppose it formed part of it. The resolution was, however, moved by Dr. Maunsell, who explained at large the objects of the Bill.

The insinuations conveyed in the following passage require some notice:—“It might be difficult to say how far, for example, Mr. Carmichael might not be induced to believe the profession ‘regenerated’ (his own words), if he found himself, by Sir James's aid, in one of its high places.” Now, I beg to assure you, Mr. Editor, that if Sir James would condescend to offer me the highest medical situation in the gift of Government, I should not hesitate to adhere to my present state of independence, and decline at once the proffered boon.—I am, &c.,

RICHARD CARMICHAEL.

Rutland Square, Dublin, June 13, 1842.

MEDICAL PRIZE.—The Committee of the Royal Humane Society have offered a prize gold medal, or thirty guineas, for the best, and a silver medal, or fifteen guineas, for the second best, Essay on the subject of Suspended Animation, and the best means of restoring life, as well as the best apparatus to be used for that purpose.

TO CORRESPONDENTS.

Dr. Scoffern.—*The Secretary of the Apothecaries' Company has transmitted to Dr. Scoffern their recognition of him "as a Lecturer on Chemistry, his present certificate from Dr. Golding Bird, together with that of Dr. Pereira, formerly presented, being sufficient testimonials required by the Court."*

Dr. Disney; X.; Medicus; Mr. Souton; Mr. J. D. Johnson—*Received.*

Mr. Cumming's letter (Castleblayney) came to hand.

A Poor-Law Practitioner.—*We shall probably revert to the subject next week. Mr. Wahley, we fear, by his omissions and commissions, has caused to be left unmodified many clauses which would have been changed, if we had had a decent member of our profession in the House. We must wait better times.*

*** *Our Journal may be ordered of any bookseller or newsman, or will be regularly sent by giving a Town reference, or transmitting, a money enclosure, or Post-Office order, either to Mr. J. Angerstein Carfrae, or to the Editor, Medical Times Office.*

ROYAL COLLEGE OF SURGEONS IN LONDON.—The SECOND and CONCLUDING LECTURE on the FOSSIL REMAINS of EXTINCT ANIMALS, will be delivered in the Theatre of the College, by Professor OWEN, F.R.S., on Wednesday, the 6th of July, at Nine o'clock in the Evening. Tickets of Admission will be delivered to Members of the College upon personal or written application to the Secretary at the College. By Order, EDMUND BELFOUR, Secretary.

June 14, 1842.

ROYAL COLLEGE OF SURGEONS IN LONDON.—The COUNCIL of the COLLEGE, desirous of furnishing to the Public a correct List of their Members, request that each Member will be pleased to transmit to the Secretary, between the 1st of June and 1st of July in every year, by letter, a Statement containing his name, address, and date of Diploma, in his own handwriting, in order that it may be compared with the Chronological List.

The President and Council, in publishing the Corrected List of the Members of the present year, with the date of each Diploma, regret that so many Members have omitted to make the return requested by the Council.

They are anxious to explain to the Members, that the object of this Annual Registration is to furnish the Judges, Magistrates, Clerks of the Peace, Poor-Law Commissioners, Boards of Guardians, and the Public generally, with a correct List of qualified Surgeons, in order to prevent the various impositions which have been practised upon them by ignorant pretenders and other unqualified persons.

The names of all Members who shall not have registered themselves previously to the month of July 1843, will be omitted in the Corrected List of that year.

The President and Council particularly wish to intimate to all Public Functionaries, that no Diploma can be genuine, in which there is any erasure, interlineation, or other alteration.

N.B. The Corrected List for 1842 may be purchased at the College for One Shilling.

June 14, 1842.

EDMUND BELFOUR, Secretary.

THE MEDICAL TIMES.

SATURDAY, JUNE 25, 1842.

"In urbe mortuum ne sepelito."

ROMAN LAW.

THE Select Committee on the "Improvement of the Health of Towns" has just closed its labours, and the evidence given before it, with the Report prepared by the Chairman, will be very shortly in the hands of the public. The Report, though of less interest than one would be prepared to expect from the character of the evidence, is, we understand, of great value, from its bold and practical recommendations in reference to intra-mural sepulture. After a brief review of the difficulties attending the prevention of interments in or near towns, it proceeds, we are told, to a unanimous declaration of the Members, that the present practice is injurious to public health, and offensive to public decency; and that an Act of Parliament for its discontinuance is absolutely essential. It then recommends, that legislation upon the subject be in the first instance confined to the metropolis, and certain other large towns and cities, the

population of which exceeds 50,000; that Westminster Abbey and St. Paul's, as sepultures for the celebrated dead, and family vaults anywhere else, as private property, should be exempted from the operation of the Act; that the authorities of a parish, or of several combined, should be required to impose a rate to form cemeteries, and should be entitled to the present rate of fees; that a minimum and maximum of distance should be fixed, to consult at once public health and popular convenience; that a due space in every cemetery should be kept unconsecrated, where the parties might use their own clergyman, and pay no fees to the Established Church; and that a Central Board of Superintendence should be appointed, to supervise and enforce the application of the law according to circumstances.

There is, we are also told, some meagre reference to the evidence of the various witnesses. The selection of an extract from Dr. Copland is very judicious. He declares "that the burial of the dead in large towns, by the exhalation of their gases into the air, and by their effect in the subsoil, and, consequently, of the water drunk by the survivors, exercises a most deadly influence on public health." Sir Benjamin Brodie and Dr. Chambers are also quoted, and a special reference is made to the indefatigable Mr. Walker, of Drury-lane, who has had a first and principal hand in getting this question agitated, and whom it gives us much pleasure to claim among the many other philanthropic members of our body, who have devoted time, talent, and money, to serve the best interests of their fellow-citizens.

— "Cui lecta potenter erit res,
Nec facundia deseret hunc, nec lucidus ordo."
HORACE.

OUR valued friend, Sir James Clark, has given us just cause to take honour in our acquaintance with him. He has written a bold and statesmanlike pamphlet on Medical Reform, which will be in the hands of the public probably before our Journal of this week. The time is opportune; and the work suits the exigency. On one or two points we entertain some little difference of opinion with Sir James; but, in general, there is the most perfect harmony with us. We proceed to lay before our readers the more important portions of the pamphlet, with a brief abstract of the rest.

Addressing Sir James Graham, the writer vindicates the reason for his addressing him just now on such a subject; and gracefully shadowing out the statesmanlike attributes that should be brought to its consideration, proceeds:—

"From what has transpired of the plan of Medical Reform now under your consideration, it would appear that the members of the medical corporations are alone consulted on the subject, and that they, as might be expected, are strenuously exerting themselves to obtain all they can,—each for his own institution; while the claims and feelings of the great body

of the profession seem likely to be lost sight of. Permit me, however, most respectfully to remark, that it is the General Practitioners whom a sound measure of Medical Reform is calculated most to benefit; let me remind you also that it is they who are principally calling for reform, and who, believing that they have little to expect at the hands of the present medical bodies, look to the Legislature, through you, to improve their position. It must, I think, be evident to every one who gives the subject his unbiassed consideration, that no scheme of Medical Reform which does not include all legal practitioners of medicine can prove satisfactory to the profession and the public, or remove the source of the discontent and jealousy which have so long distracted the medical body, and tended to lower their character in the estimation of the public."

He then establishes the necessity of medical and surgical knowledge existing conjointly in the pure surgeon, the physician, and the general practitioner alike, and thus argues:—

"If, then, the practice of the surgeon is chiefly medical, and the physician requires to be acquainted with practical surgery, while the great body of the profession, the general practitioners, necessarily practice both medicine and surgery,—what good reason can be assigned for classing one small section of the profession under a College of Physicians, and another under a College of Surgeons, while the great body of the profession is left without any bond of union, or any connexion with or interest in those Institutions?"

We confess we never yet heard a satisfactory answer to this question. A more singular anomaly with so utter a want of any reason in its favour was never presented in the Government of any division of a people before. The learned Doctor then vindicates himself from the absurd notion, that he would abolish the practical divisions of medical men into different departments, suited to their different tastes, habits, or acquirements; but he insists, as we have often done, that the general practitioners are, in fact, the profession; and that they require the chief consideration, in any enactment in reference to it:—

"By far the largest part of the population is under their care, including that portion who are least capable of judging of the merits of their medical attendants, and to whom it is the especial duty of the Legislature to extend its protection. As it has been stated, in the evidence to which I have just referred, and which will not be disputed, that to practise any branch of medicine successfully, requires a knowledge of the whole science, it necessarily follows that every medical practitioner should pass through the course of medical education deemed necessary for the general practitioner; and that those who desire to confine themselves exclusively to medicine or surgery should first take the degree which qualifies for general practice, and then devote a certain period in acquiring that additional experience and practical knowledge, and that manual dexterity, which may qualify them for Consulting Physicians, or Operating Surgeons. There will always be a sufficient number of the profession who will possess a more extended general education, and a greater amount of medical instruction and experience than could at present be required or expected of the whole body of medical practitioners, and who will consequently

take the higher degree of Doctor of Medicine. From this class will naturally be selected Physicians and Surgeons to Hospitals, Lecturers in the Medical Schools, Examiners, &c.; in short, this class would alone be eligible to such honourable appointments as will prove a sufficient stimulus to ensure an abundant supply of highly educated men as successors to the Physicians and Surgeons of the present day. And not only this: the facilities for acquiring instruction in every branch of science are increasing so rapidly, that the proportion of medical men who will take the higher degree will no doubt augment from year to year; and, judging from the progress which has been made in our own day, it will not be considered a very extravagant prediction that in the course of another half-century the smaller proportion only of medical graduates will stop at the lower degree."

He then insists on *primary* uniformity of education; and requires that a primarily equal and uniform qualification should be demanded of every medical postulant. A higher degree would await all those who had acquired a certain practical knowledge of their profession, and proved their competency by a rigid examination:

"Such a regulation would, at once, do away with all just cause of jealousy between the two grades of the profession, while the knowledge that at any future period he may take the higher degree, would prove a powerful stimulus to the general practitioner to keep up his knowledge with the progress of medical science. This relation of the two grades of medical practitioners being established, there could be no good reason why men so closely connected by education, and so intimately associated in the exercise of their profession, should be ranged in different institutions. It is surely more natural, and would, I think, be infinitely more beneficial to the profession, that the whole should be included in one institution. Make two classes of members in the united body. Let those who take the higher degree constitute the Fellows, and be alone eligible as officers for conducting the affairs of the corporation; while the general practitioners, or Bachelors of Medicine, would constitute the great body of Members, and have, under such regulations as upon consideration might be deemed proper, a vote in the election of the officers."

"A college of medicine," he adds, "so constituted, representing, as it would, the whole profession, could not fail to exercise a powerful moral influence over its members. It would constitute a court of honour from which there would be no appeal. Such a court has long been wanted in the medical profession, and would tend powerfully to elevate its character. And this I look upon as one of the most important results of the union of the profession. Were any member, who conducted himself in a manner to bring disgrace upon himself and his profession, to have his name erased from the list of the general body, and be denied the legal privileges granted to medical men, under the sanction of the Secretary of State, his destruction as a medical practitioner would be inevitable. How different would be the effect of erasing the name of a member from the list of any of the present corporations! The mere reform of the existing medical institutions would have small influence in tranquillizing the present agitated state of the profession, because such a partial measure of reform would do little for the great body of practitioners. On the contrary, I am inclined to believe that such a limited reform would produce an injurious effect upon the profession, by giving a tem-

porary stability to institutions which are not, and, as far as I can see, cannot be adapted to represent the profession as a body. Reform of the present medical corporations would even be of little permanent advantage to themselves; for it is quite certain that any reform of these bodies which has not for its aim and end the good of the whole profession, and the advantage of the public, cannot and ought not to endure. I would ask, Sir, the advocates of such a partial measure, what are the great objects to be aimed at in reforming the present anomalous state of the medical profession in this country? Is it not to improve and equalize the education of medical men throughout the country, in order that the public may be supplied with competent medical advisers? Is it not to raise the character of the general practitioner, and put an end to the discontent which has so long existed in the profession, on account of the unequal and generally imperfect education of its members, and the vexatious regulations respecting the privileges of men licensed by different bodies; and, finally, is it not to unite the whole profession into one corporate body? Can these objects be attained by reforming institutions, the separate existence of which tends to keep up the very evils complained of, while they exercise little or no beneficial influence on the profession? That the members of these bodies do not see the impolicy as well as injustice of attempting to limit the reform to a miserable extension of their own corporations, excluding the great body of general practitioners from any connexion with them, does appear to an unbiassed observer inconceivable. Such a union of the whole profession as is here advocated must come; it is inevitable, because it is the only reform which is consistent with the natural order of things, that is founded on justice, or can place the medical profession, as a body, in the position which it ought to hold among the other liberal professions."

Sir James now proceeds to lay down, as principles of all satisfactory reform, that there shall be a Board of Examiners for each of the three divisions of the kingdom, and that this board should form a learned Council, the various committees of which should have the power of examining for and granting degrees in Arts and Law, as well as in Medicine. This board, he proposes to connect with the Universities of the three capitals, modifying those institutions, to make them work more efficiently, as examining boards. There can be no doubt that the several advantages of *creditable* diplomas—absence of suspicion of unfairness, and protection to the public, would arise from this arrangement. We have, as it were, incidentally, this correct opinion on the London University:—

"In London there exists an institution already in operation, which might supply such a board. I refer to the University of London. This institution I consider, in its present state, extremely defective. The number of Fellows, thirty-five, is too numerous for an executive body, and not sufficient to admit of the formation of an effective executive council. Accordingly, the working of the University has been very difficult, and its decisions often most unsatisfactory to a large proportion of its members; and this chiefly from the want of that deliberate consideration and calm discussion, which a more limited and responsible body necessarily exercises. To render this institution efficient, the Fellows should be increased to a number sufficiently large to admit of their electing from

among themselves a council, consisting of fixed proportions of the different Faculties, for conducting the ordinary affairs of the University. Were the new Fellows chosen on account of their character and reputation in the different departments of Literature and Science, of Medicine and of Law, there would be no difficulty in selecting from the whole number such an executive council as would be satisfactory to the profession, and a guarantee to the Government that the interests of the public were sufficiently attended to."

On the Apothecaries' Company, we have this opinion:—

"It has more than accomplished all that was expected of it: but the progress of medical science since that Company was instituted renders it unfitted for the present time, and its longer continuance is not only unnecessary, but would, I believe, prove a positive injury to the profession."

On the separation of Pharmacy from Medicine, Sir James says:—

"The separation of Pharmacy from Medicine is a point strongly insisted on by some, while by others it is considered impracticable in the present state of the profession. Such a separation exists in almost every other country, and ought, and I have no doubt will do so in England at no distant period. The separation has, indeed, already commenced; and if the general practitioner is placed in that position in the professional body which he has a right to expect, it would soon be complete. Negative legislation would probably effect the separation without much disturbance to the present state of things."

He points attention also to the *gross* and truly *awful* ignorance of our midwives, who, as we have frequently upheld, "must be either cashiered or educated," and concludes with directing attention to the importance of medical polity, considered in its fearful reference to general health, and general vitality. His last words (with which we shall close our notice) will meet, we trust, from the Minister, with the attention their truth so well deserves for them:—

"I venture to assure you, Sir, that if you succeed in establishing a measure of Medical Reform based upon sound principles, you will confer a lasting benefit upon your country,—a benefit which will continue to be felt when many of the measures which are at this moment exciting so much interest, and attracting so large a share of public attention, shall cease to be remembered."

"Quidquid delirunt reges, plectuntur Achivi."

We have done Mr. Carmichael the courtesy of inserting his self-vindictory remarks, but fear that they will hardly better his position. We charged him with inconsistency, and Mr. Carmichael writes us a reply furnishing us fresh proofs. He tells us he objected to the Bill. Did we not say as much? We quoted from his speech a most emphatic condemnation of the Bill. He tells us he gave it a modicum of approbation. What more did we say? What more, indeed, need we have said? The Bill, according to Mr. Carmichael, did not advert to any one of the essential and primary objects sought by Medical Reformers, but "quite the reverse," *id est*, we suppose, directly opposed them, yet he gave it his "modicum of approbation," *id est*, declared that *if* it did not *satisfy* ALL, it was *at least* a weighty instalment for which the profession had a right to be grateful!

But Mr. Carmichael and ourselves have doubtless different notions in the word consistency, and as every man has a right to his own definition, we will in the way of compromise allow him to be consistent if he will concede to us that he has predicated essentially contradictory qualities of the same thing.

Mr. Carmichael complains that certain large portions of his address did not *happen* to appear in our account of the meeting, and seems to have a notion that they were suppressed to lend effect to our charge of inconsistency. The suspicion is unworthy of us, and perhaps still more unworthy of Mr. Carmichael. Every portion of his speech tended to support one or other of the two courses of procedure, which, united, make up what we consider essential inconsistency; and if we omitted as we did the greater portion, we did so avowedly, declaring in "good set terms" that we gave but *extracts*. Those had far less reference to Mr. Carmichael's opinions than to the heads of Sir James Graham's Bill as given by him.

Mr. Carmichael seems anxious to disavow any share in the laudatory resolution on Sir James Graham's Bill. We are pleased to notice this fact, though scarcely prepared for it after reading one part of his speech, and considering the position he holds as president of the body which adopted so very mischievous a sentiment.

Mr. Carmichael persists in thinking that legislative non-interference with quackery is wise, his reason being that no enactment can "*extinguish*" the calamity. Would Mr. Carmichael so argue in reference to other offences? Would he have no laws against theft, no punishment against murderers, because no laws framed by the "talents of lawyer or legislator" could "*extinguish*" such crimes? It is the mistake of many to think that no alteration can be made where no remedy can be suggested which offers itself as a complete cure-all. Mr. Carmichael should be satisfied to have laws which would materially decrease the evil; and we shall take an early occasion to show him that few parts of penal legislation are beset with less discouraging difficulties than that which would have reference to the suppression of empiricism to a very large extent.

We close these observations with the remark that we have penned them in, a spirit more akin to our own feelings than to those which seem to have actuated Mr. Carmichael. Pure and high science is always a passport to our favourable interpretation, and a sure safeguard against not only the injustices, but the uncourtesies of criticism. Mr. Carmichael might have spoken at the Dublin meeting with still less wisdom, and written to us with still less fairness, and yet have made certain of our forbearance.

LECTURES ON THE ANATOMY AND PHYSIOLOGY OF THE NERVOUS SYSTEM.

By Professor OWEN, F.R.S., &c.

THE crustaceous homogangliata are remarkable for the great diversity of external forms under which the essential characters of the class are manifested. Not to speak of the numerous microscopic forms of the *entomostracous* division of the class, we shall find in the more regular or *malacostracous* species all the stages of the development of the highest crustacea permanently represented. Many of the lower organised crustacea of this group are vermiform, isopodous, or with equal and similarly constituted feet, isocycloous, or composed of a succession of equal and similar segments. The dermal skeleton, however, has become in all these species firm and resisting, whereby the trunk can be raised above the ground by

distinctly articulated members. The muscular system is proportionately developed, so that when we contrast the diminution of the external sensitive system with the increase of the motive organs, as compared with the annelida, we cannot but recognise in these inferior crustacea most instructive tests of the value of that theory which ascribes sensation exclusively to the ganglions, and the motive energy to the non-ganglionic nervous columns of the articulata. Still more decisive tests of the same hypothesis will be presented by the higher species of the crustacea, on account of the varying conditions as to sensation and motion which different parts of their more diversified forms of body present. We find in the lowest isophoda, as the woodlouse (*oniscus*), and the sandhopper (*talitrus*), that the supposed sensitive organs, the ganglions of the abdominal chords, are more developed than in the annelidæ. They are likewise more distinctly bilobed, each lateral chord presenting its own ganglionic enlargements, which in these lowest species are in *juxta-position*, but not confluent, so that there is a distinct pair of ganglia for each segment.

If these ganglions be microscopically examined, three orders of nervous filaments may be distinctly perceived in them. The first is longitudinal, and extends over the dorsal aspect of the ganglia. The second is also longitudinal, and originates from, and terminates in the ganglia. The third is transverse, and connects the two ganglions of each pair with each other, and with the transverse nerves. I have never found the ganglions of each pair so distant from each other in the transverse direction as has been described and figured in the *Talitrus*. This species presents ten pairs of nearly equidistant sub-abdominal ganglions; the two first, and the two last, being most approximate. In the *cymothoa*, a species in which the tapering terminal segments of the body have begun to be concentrated by longitudinal approximation, the corresponding nervous ganglions at the posterior part of the abdominal chord present a corresponding change.

In the higher species, which present a distinct cephalo-thorax, with disproportionate development and special functions of the anterior extremities, the cephalic and thoracic ganglia exhibit proportionate increase of size, with a tendency to unite, or with actual confluence. The ganglions of each lateral abdominal chord have now more completely coalesced by transverse approximation. In the *Squilla* Mantis, the supræoesophageal ganglion or brain sends off five nerves on each side; those to the long antennæ being re-current in their course. Stomatogastric nerves are sent off from the œsophageal chords, which unite below into a long subœsophageal ganglion, apparently formed by a confluence of three originally distinct pairs. This is succeeded by three other ganglions in the thorax, supplying three pairs of thoracic legs, and there are six ganglions in the hardened muscular tail. The nervous system of the Crustacea has been most minutely and frequently examined and illustrated in those species, in which the external covering is converted by the addition of the carbonate and phosphate of lime into a dense insensible crust. Succow, in 1818, and Brandt, in 1833, have left little to desire or add in this respect in reference to the Crawfish, *asphycus pluvialis*. The cephalic ganglion sends branches to the eyes, to the large and small antennæ, to the antennal sheaths, and to the organs of hearing. A nearly straight chord is continued from this ganglion, on each side of the œsophagus, to the first of the sub-abdominal series. An azygous nerve arises from the middle of the posterior surface of the cephalic ganglion, and passes backwards to the stomach, where it com-

municates with two nerves, given off one from each of the œsophageal centres, and which, together, form the gastric system of nerves. The first sub-œsophageal ganglion supplies nerves to the masticating organs and to the pharynx, as the medulla oblongata sends off the fifth pair and glosso-pharyngeal in the vertebrata. The second to the sixth thoracic ganglia, inclusive, supply the feet and gills with nervous influence; the generative organs receive long filaments from the fourth, the fifth, and the sixth thoracic ganglions. The ventral artery descending from the heart passes between the abdominal columns at the interspace between the fourth and fifth ganglions. Six ganglions are developed on the ventral surface of the abdominal chords, which are continued along the muscular tail. The last, which is above the anus, is the largest, and radiates the nerves to the swimming plates of the tail. This is probably a coalescence of the originally distinct ganglions of the sixth and seventh segments of the tail or post abdomen. The nervous system of the lobster, as described by Cuvier, and beautifully illustrated by Mr. Swan, corresponds in all essential points with that of the freshwater species. Dissections of this species by Mr. Swan were then exhibited and minutely explained. A preparation by Mr. Newport was also shown, made for the purpose of demonstrating the non-ganglionic columns on the dorsal surface of the ganglions. The distinctions of the origins of the nerves, from the dorsal and the ventral tracts, are, as Mr. Swan remarks, by no means clear. The œsophageal columns are united in both species by a transverse commissural chord. In the prawn and rock lobster, the thoracic ganglia coalesce to form a long, elliptical, perforated mass. In this dissection of a hermit crab (*pagurus*), in which I described the nervous system fourteen years ago, in the Zoology of Captain Beechey's Voyage, the cephalic ganglion presents a transversely quadrate form, and sends off the usual nerves to the eyes, the ears, and antennæ. The lateral œsophageal chords, after supplying the digestive system with stomato-gastric nerves, unite below to form the ganglion which distributes nerves to the maxillary apparatus and pharynx. The chords there form a large oblong ganglion, situated at the base of the great nippers, and of the second pair of feet, both of which pairs it supplies. The inequality of size in the nerves of the same pair corresponds with that of the chelæ. The lateral chords diverge for the passage of the artery, re-unite to form a third thoracic ganglion smaller than the second, supplying the third pair of thoracic legs, and sending off three pairs of nerves posteriorly. Of these the lateral pairs go to the fourth diminutive pair of feet, the median pair supplying the fifth, and the dorsal pair, which are of minute size, form the continuations of the abdominal chords, and pass along the under or concave side of the soft membranous and highly sensitive post abdomen to the anus, anterior to which the last small ganglion is situated, which supplies the nerves to the muscles of the caudal plates here converted into claspers, and enabling the animal to adhere to the columella of the univalve shell, which it may have selected to protect that portion of its body which nature has left undefended by the usual dense and insensible crustaceous covering.

Experiments have been made and repeated in order to test the validity of that superficial analogy, which has induced some comparative anatomists to ascribe the same definite functions to the ganglionic portions of the abdominal chords of the articulata, which the posterior roots of the spinal nerves in the vertebrata

have been proved to possess, although the presence of ganglions in these roots is not their constant anatomical character. But not to dwell on the results of such experiments, which, though somewhat contradictory, are, upon the whole, as might have been anticipated, hostile to the conclusions founded upon so vague and unphilosophical an analogy, let us for a moment pause to profit by the deductions which may be legitimately drawn from those surer experiments which nature herself seems, in the modifications of structure, which I have just pointed out, to have instituted. We have before us two opposite conditions of a large and important part of the trunk of two nearly allied and similarly organized crustacea. In one, as the lobster, the post-abdomen is encased in a series of calcareous rings, forming a hard and insensible chain armour. But in the same degree as sensibility is lost, the muscular power is increased; a great proportion of the contractile fibre is concentrated in the tail of the lobster, which forms its most powerful and almost exclusive organ of swimming. In the pagurus, on the other hand, the muscular system is almost abrogated in the long post abdomen; for this, in fact, takes no share in locomotive functions of the body. It is occupied by part of the alimentary canal and by glandular organs; the external integument has no part of its insensibility destroyed by the interposition of calcareous particles, but retains the necessary faculty of appreciating the smooth and unirritating condition of the inner surface of the deserted shell which it chooses for its abode; nay more, minute acetabulæ are developed in groups upon this sensitive integument; delicate ciliated processes are also attached to it, to which the eggs adhere in clusters during their incubation in the female. The muscular system is reduced to a few minute fasciculi of fibres, regulating the action of the terminal claspers. If, as has been conjectured, the ganglionic enlargements of the abdominal chords monopolize the sensorial functions and the non-ganglionic tracts the motor powers, we ought to have found no ganglions in the tail, that is constructed for motion exclusively, whilst in the tail, which is almost as exclusively sensitive, the ganglions ought to have been large and numerous. The contrary, however, is the fact; six well developed ganglions distribute nerves to the muscular fibres of the lobster's tail; non-ganglionic columns supply the sensitive tail of the hermit crab, the only ganglion in which is the small terminal one, which seems to have been called into existence solely to regulate the actions of the muscles of the organ of adhesion.

The general course of the development of the nervous system in the crustacea has been, as we have seen, attended with increased size, and diminished numbers of its central or ganglionic nerves. The divisions of each pair of ganglia first coalesce by transverse approximation; distinct pairs of ganglia approximate longitudinally, rejoining as usual from behind forwards. Distinct groups of ganglia are next found in definite parts of the body, as on the thorax of those species which have special developments, and uses for particular legs. In the crab, in which the general form of the body attains its most compact form, the sub-abdominal ganglionic masses are concentrated into one large oval ganglion, from which the nerves radiate to all parts of the trunk, the legs, and the short tail. This condition of the nervous system has been well described by Cuvier in the common crab, and illustrated by Mr. Swan's dissections, from which his beautiful plates have been taken. The corresponding structure of the nervous system is also well displayed by Andouin and Edwards, in the Maia. A corresponding con-

centration of the nervous system, but with interesting diversities and modifications, has been described by Vauder Hoeven, in the limulus, or king crab, the most gigantic form of the entomos tracous tribe.

Three principal divisions of the nervous system may be defined according to the views which I entertain of their functions. Thus, admitting from analogy that the supra-oesophageal ganglionic nerve is that in which true sensation and volition reside, then those nervous filaments which are exclusively connected therewith, and some of which would seem to extend the whole length of the animal along the dorsal aspect of the ganglionic columns, would form with their ganglionic centre the true sensori-volitional system; whilst any other ganglions superadded to the abdominal columns, with the nervous filaments terminating in or originating from them, would constitute the system for the automatic reception and reflection of stimuli. The stomato-gastric nerves, connected partly with the brain and partly with the oesophageal columns, will form a third system analogous to the great sympathetic or organic nerves of the vertebrata. In these views I coincide with the ingenious physiologist, Dr. Carpenter, and shall feel happy if their accuracy and soundness have received any additional proof from the facts of comparative anatomy, now for the first time, I believe, brought to bear upon this interesting problem.

DR. ELLIOTSON ON MESMERISM.

To the Editor of the 'Medical Times.'

SIR,—A short time ago Captain Valiant, of the 40th Regiment, brought me a letter of introduction from Mr. Collen, the artist, and informed me how happy he should be to show me a wonderful instance of mesmerism in his nurse: he soon afterwards brought her to me, in company with Mrs. Valiant and Gen. Sir T. Willshire, Bt. She was a short, delicate, artless woman, about thirty years of age—one of those worthy and attached servants who are so valuable in families, and so valued and esteemed in good families. She consented to let me mesmerise her, if her mistress remained at her side. She was presently fast asleep, and in a state of sleep-waking. Her eyes became firmly closed; she was greatly distressed and agitated if I ceased to touch her, though the contact of the toe of my boot against her shoe was sufficient. My purpose is not to describe the phenomena of her case, but to give you an account of the inestimable advantages of mesmerism, in enabling her to go through a severe and long surgical operation, without the slightest pain. The facts you will find in two papers: one written by the surgeon, himself an unbeliever up to the time of the operation; the other by her master, Captain Valiant.

I cannot, however, refrain from mentioning that when the Captain first called upon me, Mr. Brookes, of Birmingham, was in my library, with his patient, Anne Badger, whose case is detailed in your number for June 4th. The Captain witnessed the excitement and stupefaction of various mental faculties in the young woman, during her mesmeric sleep-waking, by mesmerising and demesmerising the various corresponding parts of the head according to phrenology. On returning home he threw his servant into the mesmeric state; and, although she was *totally* ignorant of Phrenology, as he assures me, he excited and depressed her various faculties at pleasure, without any hint to her, by manipulating the various phrenological organs. I, therefore, repeated these experiments the day following, when he and Mrs. Valiant, and Sir T. Willshire, called.

Dr. Rigoni, the Professor of Physiology in the University of Pavia; the Turkish Chargé d'Affaires; the highly distinguished Mr. W. C. Fox, and several others, were present, some on this, and others on a second occasion on which I made the trial. Her eyes were closed, and she was in a perfect sleep-waking, as I have already said. On touching the organ of Self-esteem, she rose instantly from her seat, elevating her hand as high as possible, speaking with the utmost pride and disdain, displaying the natural language of these emotions in the most exquisite manner. On withdrawing my finger, and placing it upon the organ of Benevolence, the change was instantaneous to a humble and kind expression of countenance and voice, and she was all gentleness and goodness; On placing my finger on the organ of Wit, she became at once most merry and facetious. On pointing over the organ of Parental Love and Attachment, she became serious and gentle, and the tears streamed down both cheeks; indeed, her distress was such that I was obliged to touch over some other organ. She talked of her husband, whom she had not long seen, and of Mrs. Valiant's baby. On touching over Destructiveness, her violence was outrageous; but instantly changed to pride, gentleness, melancholy attachment, or wit, when my finger left it for the respective organs of those faculties. I played upon her brain, by my fingers, as readily as upon a piano-forte. Great as are the miracles of Mesmerism, witnessed by me now for above five years, these phenomena surpassed all. Still my character is too cautious and laborious for me to give an opinion on mesmeric phrenology till I have investigated this branch of the subject more; and I will therefore now present you with a statement drawn up by Doctor Charlton:—

Mrs. Gregory, nursery-woman to Mrs. Valiant, the lady of Captain Valiant, 40th Regiment, for a long time suffering from decayed teeth, which caused much constitutional irritation, applied to me early in May, complaining of headache and pain in the upper jaw, of the most excruciating kind. On examination, the gums were found ulcerated, the alveolar processes carious on the right side, and presenting numerous spicula of bone projecting through the gums, which were exquisitely painful on the slightest pressure with the finger. Filing off the spicula of bone was advised and consented to. The performance of the operation having been proposed while she was under the influence of mesmeric sleep, was undertaken on the 25th of May, in the presence of Sir Thomas Willshire, and Captain Valiant of this garrison. Sleep was speedily entranced by Sir Thomas, and she was pronounced in a fit state to bear the operation in half an hour.

An incision was made on either side of the alveolar processes extending from the incisor to the molar teeth, dividing the gums, which were turned back so as to expose the diseased bone. The spicula being considered the principal source of annoyance were filed off smooth with the jaw, the gums approximated, and creosote applied to the carious points. The filing occupied fully five minutes. *The patient, however, to my great astonishment, evinced not the slightest feeling from the operation, and continued undisturbed in the enjoyment of profound sleep for one hour, at the expiration of which time she was awaked by Sir Thomas, appearing as if aroused from a dream. Some minutes elapsed before perfect consciousness became restored, when she expressed herself incredulous that any operation had been performed on her jaw, being quite free from all pain.*

The phenomena evinced could only be elicited by Sir Thomas Willshire, who so kindly afforded his services to the poor woman: they appeared to be completely under his control. By his request her mouth opened to admit my instruments, which she did not feel. His taking wine and cake produced in her corresponding actions and sensations of mastication and deglutition. The pulse rose to 120,

and some excitement and spasmodic action supervened on Sir Thomas withdrawing himself for a little. But his approach and contact quieted, and eventually restored, the patient to perfect composure during her slumber.

I had hitherto been in the habit of ridiculing, and, indeed, disbelieving, every statement connected with Mesmerism; but find it impossible to reject the facts of this case, brought home by the evidences of so many senses.

JOHN CHARLTON, M.D.
Assistant-Surgeon, Royal Marines.

Melville Hospital, Chatham, June 9th, 1842.

The following statement was drawn up and given to me by Captain Valiant:—

Elizabeth Gregory, nursery-maid to Mrs. Valiant, usually called Anne, mesmerised by Sir Thomas Willshire, May 25th, 1842, Brompton, Kent.—Sir Thomas commenced at six minutes past one o'clock to mesmerise the patient for a painful operation, to be performed by Dr. Charlton on her jaw and gum, during her sleep. Anne had previously suffered very much from the fracture of her jaw, in consequence of having had five teeth taken out, perhaps unskillfully, at one time. Matter and proud flesh had formed, and caustic had been employed in reducing them. She had also been mesmerised before, for experiment, three times, by Sir Thomas, and the same number of times by Captain Valiant.

In six minutes Anne was asleep. Soon afterwards Captain Valiant called loudly, without her hearing him; but when Sir Thomas took her hand, and spoke in a low tone, she heard, and answered that she was asleep and comfortable.

At half-past one o'clock Dr. Charlton lanced Anne's gum down to the jaw from one end to the other, and made it bleed considerably, which the patient did not appear to feel at all. Dr. C. then filed her jaw-bone for the space of five minutes and a half, till what he desired was accomplished, which also she did not feel in the least—not a muscle nor nerve either twitched or moved. She opened her mouth for the operation to be performed at the command of her mesmeriser, who held her hand, and she constantly opened it wider at his direction. Dr. Charlton mentioned that a few days ago, when he merely touched the patient's jaw with a probe, she felt the pain so severely as very nearly to faint. While waiting for some creosote, Sir Thomas took some wine, when Anne went through the form of tasting and drinking, and on being questioned said, she tasted wine. The same experiment was tried with a piece of biscuit, and she said she tasted biscuit. Sir Thomas held a watch over her head, and asked her what it was. She replied—"I don't see it; but I *know* what it is." It was then held to her waistband; and she said it was a watch. Captain Valiant pinched Sir Thomas's hand, which she immediately felt too, and said somebody was pinching her hand, and she did not like it. Dr. C. applied some creosote to the patient's jaw.

At twenty minutes to three o'clock Sir Thomas awoke her, when she was not conscious of having had any thing done to her, and was very thankful to find the operation was over, and wished very much that what had been done to her during her mesmeric sleep might be published, for the good of the world in general.

Perhaps some of the medical world will believe this fact, and begin to be satisfied that Mesmerism is not only true but useful.

The Professors of University College had the fact before their eyes of a seton being passed into the neck of one of my patients who required it, without the slightest sensation; so that when I demesmerised her, she was astonished beyond measure. The faculty of Paris knew that M. Cloquet cut off a breast from a woman in the mesmeric state without the slightest sensation, as may be seen in the Penny Cyclopædia, article *somnambulism*. But they have all up to this moment been as indifferent to the fact as the cattle grazing in the meadows are to the wonders of the steam carriages passing by them on the railroads. My friend Mr. Gardiner, of Roche Court, Hampshire, entranced a young lady preparatorily to having some teeth ex-

tracted, and the astonished dentist at Portsmouth took them out, prolonging the tug at Mr. Gardiner's request, without her knowledge; so that, on being awakened, she went to the glass to satisfy herself that they were out. My friend Mr. Prideaux, of Southampton, has extracted several without a pang, after entrancing his patients previously to the operation. The time will come when no painful operation will be performed, without a previous attempt, when there is time, to entrance the patient and prevent all pain.—I have the honour to remain, Sir,

JOHN ELLIOTSON.

Conduit street, June 21, 1842.

SEPULTURE OF THE DEAD.

[For the 'Medical Times.']

It is a favourite practice of prejudiced moderns to boast of their superiority in arts, sciences, and civilization, over the ancients of every country; even over those whose arts they have lost, and therefore, *discredit*; because, forsooth! they cannot understand how Archimedes defended Syracuse, how, and what for the Pyramids were built, and how Hannibal dissolved, or hewed, or *exploded* his way through, or over, the Alps: yes, such unaccountable prejudice and stupid pride are constantly actuating the inhabitants of Great Britain during this nineteenth century, notwithstanding that we stand amazed at the proficiency of the Ancients in astronomical and mathematical observation and calculation, in architecture, sculpture, painting, music, medicine, metallurgy, and the several domestic and economic arts; notwithstanding that the patterns and specimens which have happily descended to us *from them*, are actually the *ne plus ultra* of our ambition in the way of *imitation*; and notwithstanding that nine-tenths of the moral truths of which we boast, were actually the philosophic emanations of the reflective minds of a Socrates, a Plato, an Aristotle, a Pythagoras, a Zoroaster, a Confucius, and a Jesus Christ! It is greatly to be feared that this stubborn prejudice and overweening pride and self-love, are insuperable barriers to our due progress in those very arts, sciences, and institutions, on account of which all just and reasonable persons must ever admire the inhabitants of the Ancient World.

In no instance, however, does this unreasonable prejudice affect our true interests so much as when we neglect, or affect to despise, the mode in which these ancients conducted and executed all matters of social and domestic economy, and more particularly in regard to the care of *public health*: aware, doubtless from long experience, that the seeds of death, engendered by putrefaction, will lurk unseen, and, perhaps, *unfelt* for years in the form of *miasm* and *malaria*, but will at length germinate and burst out (under atmospheric or meteoric circumstances *favourable to mortality*), as typhus, cholera, yellow fever, plague, small-pox, measles, scarlatina, and in other *epidemic* forms,—they took especial care not only to keep their habitations and cities clean and well ventilated, but also that no graves nor grave-yards for the dead should be opened within a considerable distance of the dwellings of the living. They took good care that the corpses of even their nearest and dearest relatives should be far removed from the busy haunts of men, from those localities where their survivors resided and congregated; for they foresaw the necessity of breathing a *pure and natural* air, in order that their own lives should be prolonged. But, whilst they thus prevented organized life from being contaminated by the putrefaction of disorganized animal matter; whilst they re-

moved the cause of disease and premature death from their houses and cities; whilst they, perhaps reluctantly, tore themselves from their own flesh and blood, from the lifeless corpses of their fathers, mothers, sons, daughters, and remoter relatives; they were by no means deficient in decent reverence and affectionate attention to their remains: indeed, all history informs us, that as regards respect for the *dead*, they far surpassed the nations of modern times. We have it on record, that the funeral obsequies of the rich were accompanied by sacrifices and religious festivities, at an expense almost incalculable, and certainly inconceivable by us of the nineteenth century; that many among the poor sold their all to purchase a portion of a field, or a cavern in a rock, for the burial of their wives, parents, and children; nay, that CIMON, the son of Miltiades, paid a heavy fine which had been unjustly imposed upon his father by the Athenian government, (and who had died in prison,) in order that he might be enabled to bury his body, which had been arrested at the place of sepulture.

The custom, however, which more particularly characterises the ancients in the disposal of their dead, and in which the modern practice so widely and almost unaccountably differs, was that of laying them in *rural spots*, and by the *way-sides*; so that they might rest in peace, or be a perpetual example and monitor of virtue, piety, or patriotism, to the wayfarer; hence the words so common on all tombstones, and monuments situate on the great roads of Greece and Rome, "*Siste, Viator, et lege!*" "*Stop, Traveller, and read!*" The road-side monuments were constructed of the most exquisitely sculptured marbles; the rural tombs were overhung with cypress and willow, and the avenues leading to them were planted with roses, jessamines, and other sweet-scented shrubs and flowers. How different—how much more reverential—how much more pious and truly affectionate—and how much more *salutary* as regarded the welfare of the survivors, than our disgusting mode of heaping thousands of dead bodies together in holes and vaults in the *very hearts of our cities*, for the engenderment of slow disease, and the occasional development of a whirlwind, a *siroc*, a very *simoom* of epidemic destruction! I cannot help thinking that the sculptor Roubilliac, who chiselled that famous tomb in Westminster Abbey, from where the Angel of Death issues to stab the husband of Lady Nightingale, had the modern mode of church and churchyard sepulture in view, namely, the manner in which survivors are affected by *miasma* proceeding from the graves of the defunct. This notion is far more accordant with common sense than the commonly received one, that grief for the loss of her Ladyship had so wounded the mind of Sir John, that he himself was about to take a hasty leave of the world. The latter idea has certainly been considered highly poetical; nay, it has contributed as much to the fame of the artist, as the beauty of his sculpture; but the former notion contains as *much* poetry and more *truth*, for it conveys a keen but just satire on the avaricious and abominable custom of converting a magnificent temple dedicated to the holy service of the living God, into a Golgotha of rotten human flesh and bones! Be this as it may, the signification, in the sense I have here given it, is, alas! but too true; for, unfortunately, the constant as well as occasional state of health in certain localities of this metropolis, plainly exhibits to us, a *daily and nightly inhalation of pestiferous air from some neighbouring catacomb or churchyard*. Indeed, I have no hesitation in declaring my opinion, that *phthisis pulmonalis*, *scrofula*, and other vital and destructive dis-

cases, endemic to Great Britain, and which usually bid defiance to all the powers of medicine and medical art, are *greatly nurtured by*, or perhaps, derive their *origin from the malaria* of catacombed churches and chapels, and the contiguity of the residence of their victims to some fat and well-filled churchyard.

All ancient nations avoided such dangers to their health and well-being, *by the simple but respectful process of removing the unconscious dead from the habitation and haunts of the living*. In doing so, they were doubtless as wisely directed by their own *good sense and feelings*, as by the decrees and laws of their respective governments; for, we find the same salutary custom to prevail in the East and in the West; in the North and in the South; in warm climates as well as cold; under regal as well as republican—under oligarchic as well as democratic forms of government. The act of separating the dead from the living, was no *party question*; it was not a matter of *politics*, but of *public health*. I proceed to give a few instances, from which medical and other readers will judge how *universal* was the custom of burying the dead far beyond the walls of the cities of ancient times.

THE ACELDAMA OR POTTER'S-FIELD, that resting-place for the dead so celebrated in the New Testament, as that bought with the money for which Judas Iscariot sold his master, is without the walls of Jerusalem, south of Mount Sion, and a stone's throw from the Pool of Siloam. On the mountains near that city were the tombs of the more wealthy Israelites: the Rev. Mr. O'Connor and other travellers describe these as being still in the same state as before the destruction of Jerusalem by Titus. In a garden towards the base of Mount Calvary, the memorable sepulchre of Christ was prepared by Joseph of Arimathea. In short, there is no instance on record of the body of any prince, priest, or plebeian being suffered to remain after death, within the walls of this celebrated city; and the Jews take good care to this day, in all the countries in which they sojourn, to carry their dead to some quiet and secluded resting place, far beyond the reach of any impure *miasmata* arising from their putrefying bodies.

THE CATACOMBS OF THEBES were situated in the gorges of wooded hills and mountains on that bank of the Nile which was opposite to the city; and those of MEMPHIS were beyond the Lake of ACHERUSIA; on which site, the Mythologists have laid the scenes of their *Elysian Fields*, with all the pastimes of chariot and horse-racing, athletic exercises, and rural enjoyments.

The Greeks and Romans selected the recesses and defiles of wooded heights, as well as secluded valleys, for their places of interment; indeed, the *Laws of the Twelve Tables* prohibited any dead body from being buried, or even *burned* within the walls of Rome. I have already shown that the Romans ornamented their high roads and chief entrances to their cities with the sculptured tombs of their wealthy and eminent citizens. The Athenians, as well as the inhabitants of all the other celebrated Grecian cities, were equally particular in this respect; even their illustrious men were buried in the CERAMICUS, which was a very extensive public cemetery, and superb garden, decorated with magnificent trees and the most beautiful and fragrant flowers; and which likewise contained their celebrated ACADEMY and GYMNASIUM. I think I have stated sufficient to show, that in regard to the *Sepulture of the Dead*, the ancients exhibited a much more refined *taste*—a *wiser regard for the health of the living*—and a far higher *reverence and affection* for their departed relatives, than the MODERNS; I mean more particularly those inhabiting the

British Islands, and who are in the constant practice of styling themselves the "*Most Civilized Nation in the World*." In continuation of the subject, I will endeavour to show that, with a few praiseworthy exceptions, this "*Most civilized Nation*" is far behind other nations of modern times in this most essential—nay, vital—department of social economy.

COLIN MACKENZIE.

DR. TAVERNIER'S LEVER BELT.

To the Editor of the 'Medical Times.'

DEAR MR. EDITOR,—As it seems to me that you have, in a measure, misconceived the *modus operandi* of Dr. Tavernier's Lever-belt, and as you have stated an objection which has been carefully and, I thought, successfully encountered by the Doctor, I have taken the liberty of obtruding upon you an explanation.

By the action of the "lever and busk" the body is inclined not "to the opposite side from the "principal curve," but in the *same direction* with the principal curve, or to the same side: this is the *principle*, and on this depends the success of the invention; for the equilibrium of the body being disturbed by this additional and mechanical inclination, the muscles of the opposite side (the convex side) are exerted to bring back the body to regain its *à plomb*, or directness, agreeable to the laws of gravity.

It is this action of the elongated and enfeebled muscles which lays the foundation of the safe and natural restitution of the spine.

And now suffer me to attempt to meet your objection, "that while he bends the body to the opposite side from the principal curve, it increases in an equal degree the other lateral curves of the spine." Dr. Tavernier has answered this objection by bringing well-authenticated cases of cure of double lateral curvatures by his belt; and he states that by far the larger number of cases have been double curves.

My old friend and quondam fellow-student, Dr. Verity, Physician to the British Embassy at Paris, has been witness of some of these cases. A very marked one is found in page 35 of the pamphlet, to which he has voluntarily subscribed his name, having witnessed the case from first to last; and you will agree with us, Mr. Editor, that we are not yet in Medicine in such position as to be able to throw away FACTS because they will not square with our theories; but may I hint at an explanation of the foregoing?

Many deformities may be explained in the following manner. The antagonist muscles of the two sides of the spine being unequal in power, the weight of the head and upper extremities is unequally supported; the stronger muscles producing a curve, the concave representing the stronger side. In order, then, that the heavy weight of the upper part may be again placed right with the axis of the body, a second curve in an opposite direction is established.

The action of the lever-belt is exerted primarily on the *upper* half of the *upper* curve, or that part of the curve which is above the centre of the side strap; the consequence of this direct action is indirect on the inferior portions of the spine, producing an opposite inclination, and thereby correcting the old inclination by the altered state of the upper curve, the same cause producing similar effects, although the direction of the efforts of nature is oppositely guided.

I feel a difficulty in addressing you, Mr. Editor, from the desire I have of not obtruding my observations, and from the doubts which more or less attach to all orthopedic discoveries, but still I feel convinced Dr. Tavernier's method is worthy mature consideration, and

will produce in difficult cases satisfactory results.—I am, Dear Mr. Editor, your faithful servant,

WILLIAM BREWER.

21, George-street, Hanover-square.

[We give place to the above reply, to our former notice of Dr. Tavernier's pamphlet, with much pleasure. If we have misunderstood the construction of the "Lever-belt," the author is to blame, for the description is lame and imperfect in no small degree. Dr. Brewer's explanations, however, are more satisfactory, and if the apparatus, as he says, can render straight the principal curve without increasing the other nerves (the lumbar or cervical), it effects more than we have yet seen accomplished by machinery, and is worthy of an impartial trial.]

EXTRACTS FROM FOREIGN JOURNALS.

(For the 'Medical Times.')

FRENCH.

THE following interesting cases of fracture of the cranium, resulting from falls, are taken from the hospital practice of M. Roux, one of the surgeons of the *Hôtel Dieu*, Paris. The termination was in each case fatal. The trephine was in one man applied on the day of his admission; he died 12 hours afterwards; in the second, it was not used till 2 days after his entrance; he also died 8 hours after the operation.

In case 1st there was fracture, with depression of the posterior part of the right parietal bone. For the first six days no bad result ensued; he continued to walk about and eat as usual; on the seventh day symptoms of compression presented themselves, and he was brought into the hospital.

CASE.—Violas, 17 years of age, of a strong constitution, while working in a well, had a rough stone, of the size of a walnut, fall from a considerable height on his head; a contused wound was produced in the soft parts, on a level with the posterior edge of the right parietal bone; a great deal of blood escaped; but, shortly after the fall, the patient complained of no inconvenience. During six days, he went to the hospital every morning to get his head dressed; he walked about the whole day, eating as usual; he had the use of his limbs as perfectly as before the accident; the wound of the head was slightly painful. On the seventh day there was weariness, with vomiting, loss of appetite, and fever. On the eighth day, he entered the *Hôtel Dieu*; there was almost complete loss of motion and sensation in the limbs of the left side, with paralysis of the muscles of the left side of the face. He understood the questions addressed to him, and answered readily; but from time to time fell into a slightly comatose state; he had evident signs of compression. On carefully examining the head, a considerable fracture was discovered, with depression of the broken bone. The trephine was applied, and the portion of bone removed; the *dura mater* was ruptured at this point; on incising the membrane a little blood escaped; the cerebral substance at this part was softened and disorganized, resembling pap of a dirty yellow colour. No amelioration took place from the operation, and he died 12 hours afterwards. At the autopsy, no effusion was found on the brain, either of blood, serosity, or pus. The brain was greatly injected on its surface, but its substance was of a normal consistence; on a level with the fracture it was torn and greyish, and became detached in small lumps; around this disorganized portion, the cerebral substance was of the colour of wine-lees for about a third of an inch; but beyond this areola, it possessed its natural whiteness and consistence.

Fall upon the head from the second story; fracture of the left temporal and parietal bones, as well as the base of the skull; slight depression of the broken portion of the parietal bone; contraction of all the limbs immediately after the fall; two days afterwards, paralysis, especially of the right side; application of the trephine; death.

CASE.—A man of strong form fell upon his head from a second floor; he immediately lost all consciousness and was carried to the *Hotel Dieu*. There was no wound upon the body, but a slight contused wound on the left parieto-temporal region, with trifling hæmorrhage from the ear of the same side. The symptoms presented were a very intense contraction of the upper limbs, with blunted sensation; the lower limbs also contracted, but sensible. All the muscles of the right side of the face contracted; *there was paralysis both with respect to motion and sensation on the left side of the face.* The tongue perfectly straight; the right eye turned inwards; the left eye moveable. Consciousness quite gone; he seemed neither to hear nor see. Respiration difficult and slightly stertorous; mucous r  le on both sides of the chest; a little froth about the mouth. Pulse accelerated; skin hot. (Venesection to a pint, sinapisms to the feet.) Next day, no improvement. (Two bleedings, one in the morning and one at night; emetic.) 17th. The symptoms have become augmented in intensity. The contracted state of the limbs has given way on the right side to a collapsed condition, with loss of sensibility; the contraction of the left side has also disappeared; the respiration is more stertorous, the pulse small; there is considerable depression, with froth at the mouth. On exploring the wound, two fissures of the left parietal and temporal bones were discovered on a level with their line of union; the one fissure runs in an antero-posterior direction, the other vertically; the portion of bone thus circumscribed is slightly depressed. Imagining that the brain was compressed by this piece of bone, or by an effusion of blood beneath, M. Maisonneuve resolved to apply the trephine; on removing the instrument, the depressed piece of bone could not be raised by the elevator; the crown of the trephine was again applied, and the fragment removed. There were a few clots beneath the cranium; the dura mater was incised, but no blood escaped. The trephine was then applied a third time above and behind the ear. Immediately on the removal of the portion of bone, a considerable stream of venous blood flowed out, owing to the lesion of the lateral sinus. In 30 or 40 seconds the hæmorrhage ceased, the blood escaping only in a jet corresponding with the expiratory movement; the sinus was merely grazed by the crown of the trephine, and hence the hæmorrhage was soon checked. He died 8 hours after the operation, without any remarkable symptom. On the autopsy, the left parietal and temporal bones were found to be fractured, as well as the base of the skull, the petrous portion of the temporal bone, and the body and great wing of the sphenoid. The three openings made by the trephine were also examined, the third being situated over the lateral sinus; this sinus was double the size of that on the opposite side, and received the greater part of the blood from the brain. The internal jugular vein was filled up with a large fibrinous clot. In the central fossæ, at the base of the skull, especially on the right side, were found numerous clots of blackish blood; the left facial nerve was ruptured; the fifth pair of the same side passed above the fracture of the petrous portion of the temporal bone, and was compressed by clots of blood filling the cavernous sinus; *thus explaining the paralysis of motion*

and sensation on the left side of the face. The right motor nerve of the eye passed over the fractured part of the sphenoid bone: did the squint of the right eye depend on this circumstance? The surface of the right hemisphere of the brain was covered with clots of blood; on the left side there also existed coagulated blood, but in less quantity. The cerebral substance was softened on a level with the depressed bone; there was no inflammation nor effusion into the ventricles, nor in the cerebellum. The thoracic and abdominal organs were free from injury.

EDINBURGH UNIVERSITY.

To the Editor of the 'Medical Times.'

SIR,—Since the date of my last communication another vacancy has occurred in our University, by the resignation of the chair of pathology by the talented Dr. Thomson; and the town council have issued an advertisement stating that they will proceed to the election of a successor on the 9th of August, 1842. Dr. Davy, Inspector-General of Army Hospitals, London, and Dr. Handyside, Lecturer here, are the only candidates at present publicly in the field, but no doubt more will soon appear. These two gentlemen, in offering themselves, have promised to abstain from personal canvassing; and Dr. Davy stated, in addition, that as testimonials were disagreeable to the patrons, he would content himself with a reference to his published works. At present I shall reserve what I have to say on the subject to a future communication, which I shall send you whenever I have accurate information on all points connected with the above.

A case, unexampled for recklessness and gross ignorance in the administration of drugs, was tried on Monday, the 13th of June last, in the High Court of Justiciary here. It appears from the reports, that a Robert Henderson, carrying on the trade of a grocer and druggist, and his shopman, William Lawson, were charged, the first with procuring a quantity of drugs, and employing his assistant to vend, prescribe, and administer them, he being ignorant of the whole art of dispensing medicine, and having failed in teaching him (the assistant) the uses of the drugs. Lawson was further charged with selling, on the 20th of January, 1842, as a safe dose for a vomit, *sixty grains*, or thereby, of tartarized antimony, which had been sent for by a Mrs. Johnston; and it was stated in the indictment that, in consequence, James Johnston was seized with mortal pains and sickness, and died in the course of the same night; and "was thus bereaved of life by the gross ignorance, negligence, recklessness, and other culpable conduct" of the prisoners, who were accordingly charged with culpable homicide. This is the case, Sir; and truly it presents a melancholy picture of what man's ambition and sordid avarice will lead him to commit. Here is a man, with a precious specimen of humanity in the person of his assistant, taking upon them a profession, of the very fundamental principles of which they are as ignorant as was our first Adam. *SIXTY GRAINS* of tartar emetic, a safe dose for a vomit! Why, any old hag in the country would have been able to tell them that it was enough to kill sixty, instead of being a safe dose for *one*. But it is needless to animadvert on the monstrosity and brutal ignorance displayed in this plain told unvarnished tale. Alas! it is only one of the many which are daily occurring, and along with them, it speaks loudly and eloquently for immediate redress. Such a state of matters cannot long exist, otherwise consequences of

the most fearful nature will happen; and the *onus* of the whole will rest with those in whom the power of redress lies. Indeed, things ought not to be allowed to remain as they are, or where, we may ask, is it to end? In almost every small town in England and Scotland you find impostors similar to this rascal, for he is nothing else—Henderson, who could not tell you whether a grain, a drachm, or an ounce of calomel were a safe dose for an individual; and yet these are the men in whose hands a mean number of human lives rest. We ask redress for this, not as a favour, or in the name of the medical profession alone—not because these villains are depriving us of what duty is our own—but we ask it in the name of our fellow-creatures, for the sake of all that is sacred; and our lawgivers ought to consider it their highest privilege to be able to counteract an evil, an equal to which can only be found in the worst scourge that ever visited our land.—I am, Sir, your very obedient servant,

THETA.

MEDICAL MEMS. OF THE WEEK. By PERISCOPICUS.

USES OF LIVER.—Dr. Bostock speaks of the liver as a subsidiary organ, serving, with the lungs and kidneys, to remove any excess of the materials of nutrition that may exist in the system. The elements which enter into the composition of any aliment, and which, after due elaboration, are deposited in the blood, may be considered as essentially consisting of carbon, azote, hydrogen, and oxygen; and with respect to at least the three first of these elements, a distinct organ is provided for the removal of any superfluous quantity of them which may exist in the blood, after supplying all the wants of the system. The processes by which this removal is effected, and which may be styled depurative, are performed for the three elements respectively by the lungs, kidneys, and liver. The depurative process carried on in the lungs consists in the evolution of caloric, an effect produced by a portion of the oxygen of the inspired air combining with a portion of the carbon of the venous blood, which latter, were it to remain in excess in the circulating fluid, would render it totally unfit to perform its appropriate functions, or even for the temporary continuance of life. The nitrogen is removed from the system by the kidneys in the form of urea, which is eliminated from a comparatively small portion of the blood. Dr. Bostock speaks of this organ as a kind of secondary cloaca; the intestinal canal being the channel for carrying off the residual part of the food, after the separation of its nutritive matter, while the kidney discharges the heterogeneous substances which have been received by the blood-vessels, but which, being no longer required, or having performed their appropriate functions, are to be regarded as residual. The third depurative process differs from the preceding, inasmuch as but a comparatively small portion of the blood is operated on instead of the whole mass, as in the lungs, and the blood is venous instead of arterial. The blood, after passing through the pulmonic circulation, is sent into the great systemic arteries, purified from its superfluous carbon. The excess of azote and the various saline substances are next removed by the kidney, after which the whole of the blood is returned from all parts of the body, and conveyed to the great venous trunks. A portion of this blood, selected from the anatomical relation of the parts, and not from any chemical difference in the nature and quantity of its constituents, is carried to the liver, where it is freed from superfluous matter,

while a substance is generated, in the composition of which hydrogen largely enters, and which is essential to the proper action of the digestive organs. When, from any cause, a minor quantity of carbon is required for the evolution of heat in the lungs than is consistent with the healthy constitution of the blood, the liver is the organ by which the irregularity is rectified, by an increased secretion of bile, thus showing an additional provision in the systemic arrangements for the removal of any excess of carbon that may accumulate. There does not appear to be any process provided for the removal of oxygen from the blood.

LIME MOXA.—Dr. Osborne, of Dublin, has availed himself of the high temperature produced by lime in the act of slaking, for the purpose of a moxa. Some quick lime in powder, to the depth of about half-an-inch, is placed upon the skin inside a *porte moxa*, or a strip of card bent together, and tied so as to form a circle; some water is dropped on and mixed with it. In about ten minutes the mixture swells and becomes dry, and at the same time a high degree of heat is produced, which may amount to 500 deg. Fahr. This moxa Dr. Osborne considers to be far superior to all others; first, from the intensity of the heat, which, by using a larger bulk of lime, may equal the potential cantery; and secondly, from its convenience, not requiring the assistance of any heated substance, and being unaccompanied by the emission of sparks or smoke, which create terror in the mind of the patient. When the quantity of lime applied is smaller than above mentioned, or not kept on long, the result is an appearance resembling that produced by acetic acid, and a thick crust is formed which separates according as the new skin is projected underneath. When, however, the quantity is as large or larger, and kept on as long as the heat continues, then a complete destruction of the skin ensues; and thus issues may be made of a greater depth, and in a much shorter time, than by the usual escharotics. In order to ascertain the depth to which this moxa acts, he applies it on the surface of an egg, and then observes the thickness of coagulated albumen formed underneath. This shows the extent to which the serum may be coagulated in the vessels of the part, and which is subsequently separated by ulceration as a foreign body; but the beneficial action of a moxa does not stop here—its superiority as an escharotic or counter-irritant, according to Dr. Osborne's view, consists in this, that the heat produces a contraction and change in the action of the parts over which it is applied, with great excitement of the absorbents, enabling them to return to a state of health after the failure of all other means, as may be seen from the cases related in Larrey's work on this subject, and as is well known and acted on by veterinary practitioners. In one case at Mercer's Hospital, it was productive of a very decided change. A female laboured under the symptoms of ulceration of the upper part of the rectum and sigmoid flexure for above a year, and had constantly most severe pain in those parts on passing her motions, which were accompanied with discharges of purulent and sanious matter. On being examined, the rectum and lower part of the colon were free from contractions, and the faecal masses which occasionally passed, although productive of great suffering, yet showed that the passage was not considerably narrowed; a lime moxa, which extended to about the size of a crown, was applied over the sigmoid flexure, and was immediately followed by a diminution of pain and an almost complete cessation of the discharge; and before the ulcer produced by the moxa had filled up by granulations, all the symptoms of the internal ulceration had entirely disappeared.

In a case of commencing softening of tubercles, and in another apparently of purulent infiltration after pneumonia, its effect in putting a stop to the ulcerative process was most decided. In a case of hip-joint disease, in which there was great pain, and consequently loss of sleep, the patient slept well on the following night, and in a few days gained much power over the limb; and in another case of the same disease, which had proceeded to destruction of the joint, and extensive enlargement of the parts around it, a copious discharge of the moxa was followed in a fortnight by a complete subsidence of the enlargement, and a corner of the ulcerated surface is now kept open as an issue, the remainder being allowed to heal under a water-dressing. It is to be observed that the size of the ulcer formed is always much larger than that of the lime applied, in every case having at least twice its diameter. When the lime is prepared from calcareous spar, the heat produced on the addition of water is sudden and intense, and the pain is proportionately urgent. For ordinary purposes, however, well selected pieces of lime, from a lime-kiln, answers well if fresh, but not otherwise.

CÆSARIAN SECTION.—Mr. Ross, of Inver-gordon, gives a fatal case of gastro-hysterotomy. The patient, a woman, thirty-five years of age, was suffering from cough, asthma, and dropsy at the time, and was of a broken constitution, and unfit to bear so serious an operation, which, however, offered the only chance of safety for her and her child. According to the midwife, the poor woman had been in labour, more or less, twelve days. On examination per vaginam, the head of the child could be felt, but, from the deformed state of the outlet, nothing else could be ascertained, the tuberosities of the ischia approximating so closely, that the aperture might be compared to a slit scarcely an inch in breadth, and about two inches in length, the coccyx closing up the lower part. Dr. Cameron, of Tain, assisted at the operation, which was successfully performed, as far as regards the extraction of a living child, which ultimately did well. The poor woman survived the operation five days and seven hours. Mr. Ross gives no account of the seetio cadaveris.

NECROSIS.—Mr. Douglas mentions a curious case of spontaneous separation of the upper jaw. A boy had canerum oris, which took on healthy action, and healed. The upper jaw, however, died, and came away entire, with the exception of its nasal process. It separated at the sutures from the palate bone, the vomer, the malar, and the maxilla of the opposite side. The bone is not completely developed; the two bicuspides, and the dens sapientiae being still deep within the jaw.

DISLOCATION OF THE TIBIA BACKWARDS.—Mr. Rose, of Swaffham, says, on the 17th of December, 1829, I was summoned to a woman who had been flung violently from the top of a stage-coach. I found the tibia completely dislocated at the knee, the head of that bone having been driven behind the condyles of the femur into the ham, with the patella thrown to the outside of the external condyle of the femur, and the leg in a state of fixed extension. I immediately and without difficulty restored the parts to their normal situation by applying one hand to the patella, the other to the back part of the upper portion of the tibia, and simultaneously pulling and pushing these bones into their natural positions. By the employment of leeches, evaporating lotions, and strict rest, inflammation was kept in check, no untoward symptoms arose, and after the lapse of a few weeks she perfectly recovered the use of the joint.

SECONDARY SYPHILIS.—Dr. Cowan, of Reading, in a medical practice, had seven cases

of syphilis, six males, one female. The age of all the former was between twenty and thirty; the female was an infant, five months old, afflicted with chronic coryza and pericosteal swellings of the scalp, which easily yielded to the internal and external use of mercury. The adults were all treated by the hydrochloride of potass, and all evidenced the value of the remedy. A compound calomel pill, and sufficient opium to allay pain, were conjoined in three cases, but the principal benefit seemed clearly dependent on the iodine, the efficacy of which seems, by widely concurrent testimony, to be now established. The chloride of soda gargle was found useful when the throat was ulcerated; sarza was not employed.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Showing the number of Deaths from all causes registered in the four weeks ending May 28, 1842.

	May 7	14	21	May 28
Small-Pox	1	4	3	5
Measles	24	22	20	32
Scarlatina	7	10	15	17
Hooping-Cough	26	37	24	39
Croup	19	10	13	10
Thrush	6	5	4	1
Diarrhoea	3	3	3	7
Dysentery	2	—	—	2
Cholera	—	—	—	—
Influenza	2	1	—	3
Typhus	19	30	22	5
Erysipelas	6	6	2	5
Syphilis	—	1	—	1
Hydrophobia	—	—	—	—
Diseases of the Brain, } Nerves, and Senses }	152	133	143	154
Diseases of the Lungs, and } Organs of Respiration }	200	250	255	255
Diseases of the Heart and } Blood-vessels }	24	20	28	30
Diseases of the Stomach, } Liver, &c. }	65	59	52	51
Diseases of the Kidneys, &c. }	9	5	6	4
Childbed	10	5	4	5
Ovarian Dropsy	—	—	—	—
Disease of Uterus, &c. .. .	3	1	1	4
Rheumatism	3	—	2	—
Diseases of Joints, &c. .. .	4	3	3	3
Ulcer	2	—	—	—
Fistula	—	—	—	—
Diseases of Skin, &c. .. .	1	—	1	2
Diseases of Uncertain Seat	100	100	115	83
Old Age or Natural Decay	56	47	55	63
Violence, Privation, or } Intemperance }	17	16	31	31
Causes not specified	2	5	3	2
Deaths from all Causes ..	756	773	805	833

ST. MARGARET'S, WESTMINSTER.—Yesterday, on the writer proceeding through St. Margaret's churchyard, by the side of Westminster Abbey, he had to pass by a newly-opened grave, and having on several previous occasions seen great numbers of human bones lying about the ground, he was induced to look into this newly-formed tenement of the dead, and saw nearly the whole of a human skeleton, the coffin which had contained it being broken to pieces in forming the new grave. By the side of the grave, and amongst the soil which had been thrown up, were the two long bones of the leg, with several others. The depth of the grave was not above five or six feet, and on either side were to be seen coffins in a rotten state. This grave was near the western entrance to the church. At the other end of the churchyard, and within a few feet of the foot-path opposite the side of the Westminster Session-house, another grave had been dug, ready to receive a corpse, and in this, as in the former, the coffins containing the dead were exposed to view. Human bones were also thickly strewn upon the earth. The writer then proceeded on his journey, and on his return went to the first grave, and found all the bones had been removed; but, on looking into the grave, saw that the bottom and part of the right side of the old coffin remained. The earth, however, was strewn over it in such a manner as to prevent any but the curious from noticing what it was.—*Times*, June 17, 1842.

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List of gentlemen admitted members, on Friday, June 17th, 1842:—

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Admitted Monday, June 20th, 1842:—

J. Taylor; G. F. White; C. Shorten; R. E. B. Horniblow; T. O'Reilly; M. Hamilton; E. U. Berry; L. Boyton; B. Lever; S. Balding.

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Expected with dissecting knife
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"Dated October 23, 1840."

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THE MEDICAL TIMES.

A Journal of English and Foreign Medicine and Medical Affairs.

No. 145. VOL. VI.

LONDON, SATURDAY, JULY 2, 1842.

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INTRODUCTORY ADDRESS TO THE PHRENOLOGICAL ASSOCIATION, LONDON.

JUNE 20, 1842.

By Dr. ENGLEDEE, of Portsmouth.

DR. ELLIOTSON in the Chair.

Mr. President, and Members of the Phrenological Association.—Having been requested to deliver the Address at this Anniversary Meeting of our Association, I must be permitted to make one preliminary remark; it is this—all Cerebral Physiologists do not entertain similar opinions, consequently, the doctrines advanced in this Address must not be received as the expressed opinions of our body, but rather as the doctrines conscientiously believed—deliberately and determinately promulgated on this occasion, by a section of our body. In the consideration of a subject essentially bearing on the advancement of our race, uniformity of thought is to be desired; but uniformity of thought is only to be obtained by the establishment of true principles. Influenced by this object I shall wander from the monotonous routine so long followed, and insist on the future exposition of our principles being preceded by the inculcation of material doctrines. This is not done with any sectarianising spirit, but with the hope of seeing all influenced by one power—the most powerful of all powers—Truth.

If we survey the characteristics of our age, amongst the most important and striking is the tendency to form societies and associations. For the development of every branch of literature, and every department of physical science, an association is formed; and men seem to be impelled by one most obvious truth, that "union is strength." By this concentration of intellectual energy we every day witness astounding results. The victories which have been gained over inorganic matter—the stupendous revolutions which Science has achieved—it is our duty to imitate by unceasing efforts to unravel one portion of organised tissue. This is to be accomplished by the collection of facts, by the experience and efforts of numbers; and, for the more perfect dissemination of our views, and the more easy collection and generalization of our facts, we have formed ourselves into this association. But why does not this association claiming for its title the designation of British? Because it has been declared, that the man who attempts to introduce discussions, having for their object the investigation of living matter, is an enemy to the success of this national undertaking. The members confine themselves to the investigation of inanimate matter—they search out with the most scrupulous exactness, intricate questions in the physical sciences—they spend their thousands in the collection of information essential to the assistance of man, in the battle he is fighting with the elements; but man himself, the most intricate piece of organism—the most astounding specimen of Nature's efforts—the very topmost link in that chain of life spread daily before us—the vitalised lump of clay wearing the human form—claims not a moment's consideration.

We must work out this problem; and in our researches we are not to discourse concerning essences, spirits, or the immaterial mind, but concerning one of the innumerable modifications of matter—we have to investigate one portion of man's organism (brain), and we have to determine its peculiar functions. Having taken this preliminary step—understanding what man really is—we have next to apply this knowledge; and by this means great changes will be effected. Nevertheless, we must perform this duty apart from every other consideration, apart from received opinions and doctrines, and unmoved by the weight and number of antique theories.

The accumulation of our facts, our observations, and our experiments, would be perfectly useless if allowed to continue a chaotic mass, without arrangement, classification, and generalization. Facts form the basement-structure of our system of philosophy. But the period is come when we must cease speaking of our facts only—the constant inculcation of them was necessary during the first promulgation of our views—it is now our duty to apply them, to build up a system, and then make it bear on specific points. The value of the marble is not known, and its beauty is not seen, whilst it lies concealed in the quarry, untouched by the chisel of the sculptor; so, in like manner, the applicability, the great power and tendency of our principles and conclusions are either unseen, or their vast importance unrecognised, if allowed to remain in their present position, and not made to exert their influence on questions bearing most powerfully on man's progression. In pursuing this course, we must expect difficulties; but we must remember, that in the majority of instances we have to deal with untrained intellect, and consequently with the slaves of prejudice—we have to fight with those who are still influenced by the impressions communicated during infancy. Some from sloth, and others from a deficiency of moral courage, are deterred from examining the views and doctrines they embrace, and thus prolong their infancy to the tomb. Can we wonder at the opposition offered by such characters? Can we be surprised if they denounce physiological investigations as evil and unwise speculations? Why are the conclusions of inductive research evil and unwise? Because such conclusions overthrow preconceived fancies and opinions, and bid the offspring of the imagination give way to a candid and scientific appeal to man's reasoning faculties. Since we address ourselves to the intellect, we ought not to consider the prejudices of the multitude. We have all sinned in this particular: we have all been too anxious to make our views dovetail with the views and opinions now current in society. No Cerebral Physiologist should do this. By this title, we mean the individual who is conversant with the cerebral organism of man and the lower animals—we mean the philosopher, and not the empiric—the physiological investigator, who, after deducing certain principles for his guidance, boldly follows them out, and fears not the result, however it may interfere with received opinions, and established dogmas.

We are perfectly aware that the views which such considerations open up are new and startling,—but they are true. The promulgation of these views may produce inconvenience to some, and uneasiness to others, but no considerations of this kind can offer any good reason for their suppression. Are we to sacrifice what we conceive to be truth, at the shrine of expediency? Is ultimate good to be lost sight of? Are we to be the butterflies of a day, and unalloyed selfishness our ruling passion? Are we to employ ourselves in pandering to the taste, fancies, and prejudices of our own generation? Are antique theories and visionary speculations of more importance than laws deduced from a careful consideration of man's nature?

We should cease our endeavours to reconcile our views with any particular kind of doctrine, because it is dishonest, and boldly assert what we consider truth, regardless of the effect. We dislike all attempts at mutilation. Let truth be the idol of our reverence. No real good has ever been effected by stifling truth, but immeasurable mischief has always resulted from the promulgation of error. It is truth which makes free—and the continued promulgation of truth is the only way to ensure perfect freedom.

If ever there were a period in the history of our race when it was preeminently necessary to possess correct principles for our guidance, it is the present. Ancient history traces the outlines of a mass of preponderating animalism. Modern history tracks out the course, and records the struggle of intellect escaping from bondage.

We have now presented to our view a period when men have commenced to look beyond the mist which has so long enveloped them, and retarded their progress—a period when "humanity is leaping from her bed of apathy"—a period when the masses are breaking from their thralldom, and beginning to understand their true position—when new and untried principles and powers are at work—when efforts are making by all parties to furnish the means of improvement, to sow those germs which, when rooted and grown up, must of necessity bring about a social revolution.

It must be apparent to all, even to the most common observer, that these are not common times; a great change is in progress, and men are beginning to act on principles more accurate and more enlightened. But still the style of thought would be more becoming to the period of immature life than to vigorous manhood. Men still require to be educated in a system of philosophy which will point out the necessity of discarding completely those narrow and limited views which have so long harassed and perplexed them. Such a system of philosophy is ours. All other studies are insignificant when compared with this—the study of man. With this key, what bright prospects open up! Who can predict the effect when man's capabilities shall be drawn forth—when his happiness shall bear some relation to his power of attaining it? As yet we scarcely know these capabilities; as yet we are only on the threshold of investigation; as yet we have done little more than act the part of pioneers: we have opened the shaft, discovered the mine, but the amount of treasure cannot be estimated. Nevertheless, we are justified in suggesting with plausibility what we cannot predict with certainty.

Glance for a moment at the achievements of some of our modern philosophers! How have these victories been gained? They result from superior organism—from trained organism. If this be true—and who can doubt it?—consider the thousands, nay, millions that are allowed to live, grow up to maturity, shrivel and die at an advanced age, enveloped in their native rust, without an attempt to train, without an effort to afford the natural stimulus to their famishing organs. Is this right? Is this just? Is this state of moral and intellectual abortion to continue? No! The multitude must be roused from their lethargy—they must be taught to think and judge for themselves—to put forth their giant power, the most distinguishing characteristics of their species.

Look at the cerebral mass of a great character, and witness the astounding results of its action! Think of the cerebral mass of the famishing millions, and estimate if you can, the results which might be obtained if each brain were trained, if each individual were placed in that situation and calling nature intended. Estimate, if you can, after the lapse of a few generations, the acquirements, the position, the intellectual and moral grandeur of such a race. If, then, we have even now but a

faint idea of man's endowments—if they are now comparatively boundless and unexplored—if we are, after the lapse of so many ages, only commencing the study, what better guarantee can we have of the fact, that humanity must advance, that as years roll on, and one generation succeeds another, man will gradually remove all impediments to his happiness, and assume that position his organism fits him for? Our race is in a transition state; but the course is onward, and the boldest and most enthusiastic thinker does not possess data by which he can predict the attainments at any given period: this is a secret, a germ in the womb of Time, to be evolved by man himself—to grow in the proportion he ascertains and obeys the laws governing his structure. Extravagant and speculative as it may appear, we triumph in the idea of such an approaching consummation. We hold no dispiriting views—we look on man as only just emerging from a degraded position; and the impression a retrospect of his past existence conveys, is humiliating in the extreme. But we augur more favourably of his future progress, and dare picture in the distance his future destiny.

Exactly twelve months have elapsed since we were assembled in this room for the purpose of promulgating views considered to be of essential importance to the well-being of our species. How have we spent the intervening period? What means have we taken to ensure their reception? What steps shall we take to inculcate the necessity of educating the rising generation in our system of philosophy? What is the cause of so much doubt concerning a question so important, so self-evident? What prevents its reception?

It has appeared to us, that the very first axiom of our science is erroneous. "The brain is the organ of the mind."

Mr. Combe states—"We do not in this life know *mind* as one entity and *body* as another, but we are acquainted only with the compound existence of *mind* and *body*, which act constantly together, and are so intimately connected, that every state of the *mind* involves a corresponding state of certain corporeal organs, and every state of these organs involves a certain condition of the *mind*."

A similar doctrine we shall find inculcated by almost all writers on Cerebral Physiology.

This is mere assumption. We boast that our science is purely inductive, and yet in the enumeration of our axioms we assume a position all our facts tend to disprove. To evade the charge of materialism, we content ourselves with stating that the immaterial makes use of the material to show forth its powers. What is the result of this? We have the man of theory and believer in spiritualism, quarrelling with the man of fact and supporter of material doctrines. We have two parties: the one asserting that man possesses a spirit super-added to but not inherent in brain—added to it, yet having no connexion with it—producing material changes, yet immaterial—destitute of any of the known properties of matter—in fact, an *immaterial something*, which in one word means *nothing*, producing all the Cerebral functions of man, yet not localized, not susceptible of proof; the other party contending that the belief in spiritualism fetters and ties down physiological investigation—that man's intellect is prostrated by the domination of metaphysical speculation—that we have no evidence of the existence of an essence, and that organized matter is all that is requisite to produce the multitudinous manifestations of Human and Brute Cerebration.

We rank ourselves with the second party, and conceive we must cease speaking of "the mind," and discontinue enlisting in our investigations a spiritual essence, the existence of which cannot be proved, but which tends to mystify and perplex a question sufficiently clear, if we confine ourselves to the consideration of organised matter—its forms—its changes—and its aberrations from normal structure.

Almost all physiologists commence their investigations with an unfavourable bias. How is this? Because they first adopt a theory, and then commence their investigations, instead of first taking a wide and extended view of Human and Comparative Physiology, apart from preconceived opinions: because in their infancy they were

taught that man's position depended on the possession of some essence; and in their manhood, that intellect, which should investigate the grounds for such a belief, is cabin'd, cribb'd, confin'd, by the apparent necessity for such a speculation. Is it necessary to prove this? Consult physiological writers, and we find that they are perfectly satisfied that the seat of mental operations is the brain, and no other organ; yet they contend that nothing more has been proved than this: that the brain by its peculiar organism is the instrument by which the mind acts. They introduce us to a phantom—they call forth a spirit, and, without the shadow of a proof, state, it guards, governs, and directs material movements.

We contend that mind has no existence—that we have to consider matter only.

What is organised matter? Merely a collection of atoms, possessing certain properties and assuming different and determinate forms. What is Brain? Merely one kind of organized matter. What do we mean by Cerebration? The function of the brain—one of the manifestations of animal life, resulting from a peculiar combination of matter. The varied changes of form which this matter assumes give rise to the numerous manifestations of Cerebration in the different tribes of beings, and the varied changes of Cerebration in the same being originate in molecular alterations, merely other expressions of a new condition.

Cerebration, then, expresses the manifestation of a series of actions resulting from the properties possessed by a particular portion of organism (brain) when acted upon by appropriate powers. In the same way as organism generally has the power of manifesting when the necessary stimuli are applied, the phenomena which we designate by the term life—so, one individual portion (brain) having peculiar and distinct properties, manifests on the application of its appropriate stimuli, another species of action, which we propose to call Cerebration. If the sum of all the bodily functions—life, be not an entity, how can the product of the action of one portion of the body (brain) be an entity? *Feeling and intelligence are but fractional portions of life.*

The "why or how" such a form of matter is capable of manifesting such peculiar function we cannot explain: it is sufficient for our purpose to decide that it does so—we may never go further. Does any one doubt the power of matter to do this? To such a one we would say, who dares assign limits to the inherent powers of matter? Let us first find out all that matter *can do*, before we dogmatize and assert what it *cannot do*.

No action can go on in an organ, that is to say, no manifestation of the function of an organ can go on without a change in the organic molecules composing it. This position was beautifully verified in the case related by Mr. Combe, where the skull-cap having been removed by an accident, and the brain exposed, he was enabled, by conversation, to excite particular faculties, and he noticed that the manifestation was always accompanied by a peculiar movement in the portion of brain forming the cerebral organ. We are at present quite incapable of ascertaining by what means impressions made on the organs of the senses are conveyed to the brain, or how the various stimuli emanating from the brain are conveyed to the several organs. This is most probably, by a change in the molecular arrangement, as rapid as galvanic action, and perhaps more so. However, we know as little about this as we do of the nature of light, galvanism, or electricity.

In an organ whose function is to secrete a fluid, we are perfectly aware that the fluid may be vitiated and altered by a very slight change in the ultimate structure, and at first the change is not appreciable by our senses. If abnormal function continue, it is the result of absolute organic disease; that is to say, there is an alteration in the arrangement of particles quite incompatible with healthy action. In like manner, an alteration of cerebral structure is always the cause of abnormal cerebration. We see no better reason for supposing that the manifestation of cerebration depends on the excitation of cerebral matter by "an essence"—"a principle"—by "the mind"—than we do that the bile or the saliva are secreted by their respective

glands, through the instrumentality of the same or some other essence. We do not speak of liver principle or salivary principle. We see a certain arrangement of particles in the form of an organ called liver, and a certain kind of blood sent to it; the result is, the secretion of a particular fluid, which we call bile; further than this we cannot go: no other organ is so organised, no other organ produces a similar secretion.

We see certain articles of food conveyed to the stomach excite it to the performance of its function—Digestion. The external senses receive impressions and convey them to the brain, and excite it to the performance of its function—Cerebration. As the perfect performance of digestion depends on the healthy state of the organ—Stomach; so the perfect performance of cerebration depends on the healthy condition of its organ—Brain.

It may be said, these views partake of the grossness of materialism—I have yet to learn there is grossness in truth; that they tend to shock harmless prejudices,—I have yet to learn a prejudice can be harmless; that they will produce a revolution in prevailing modes of thought, and overthrow received doctrines and acknowledged principles. Be it so. If principles, doctrines, and orthodox formulæ for thought, are erroneous, and render men purblind, sweep them away. Fear not truth—disdain not reason—follow not authority—let opinions be maintained by the firmness and solidity of their bases.

But some one remarks, this is not the doctrine of Gall. Where are there ten Cerebral Physiologists who have studied his writings? It is a crying shame that we are not more intimately acquainted with him—more influenced by his boldness—more anxious to profit by his researches—more ready to adopt the same truth-loving course of inquiry. But this is Gall's doctrine. How miserably have we fallen off and neglected his views! He says, "Your understanding, your volition, your free-will, your affection, your judgment, instinct, &c., will be no longer personified beings—they will be cerebral functions!" Is this not an intimation of the very doctrine we have inculcated? But suppose we had not been supported by Gall—how senseless the objection! The science he left in its infancy has been cradled and nursed, but we find it still comparatively in its infancy. Are his writings to be always referred to for the truth of views deduced from the position of man generations after his removal? Such a notion is untenable—it strikes at the root of all progression, and if applied to the discoveries and advancement of any other science, to the labours of Davy and Dalton, of Newton or Herschell, would be considered unphilosophical in the extreme.

Again: we would ask those who are still doubtful, whether by means of intellect they gain a knowledge of the existence of anything independent of matter? We would ask them whether they can picture to the imagination "the mind" of man apart from the organism composing the man? If they cannot do this, we say, why make man an exception to the invariable law of nature? Why, in ascending link by link the chain of organic life, add an indefinable something to the last link, which it was found unnecessary to call to our aid in the preceding? Witness the unrelenting and savage ferocity of one tribe; the fidelity and tameness of another; the sagacity, gentleness, and intellectual manifestations of a third: contrast all these with the characteristics of man, and explain, if possible, why we are to have recourse to a theory? Why, in jumping from the sagacious monkey to man, are we to have recourse to the stimulus of an essence for explaining the superior cerebration he manifests? Why not give a portion of this or some similar essence to the monkey, because his cerebration is superior to the sheep or goat? Nay, why not allow a minute portion of some more impoverished essence to the fish, which obeys the call of its feeder, and swims to the required spot for its daily nourishment? If this be ridiculous—if no addition be requisite to account for the improved cerebration of inferior beings—why, without the slightest evidence, are we to suppose that a higher order of cerebration in man cannot be manifested without such addition?

It is this conjectural doctrine—this belief in the in-

dividual and indivisible essence of mind—this love of the marvellous—this thirsting after something mysterious, which is retarding the progress of cerebral physiology, and, in the same ratio, the happiness of man. It is this clinging to old opinions—this disinclination to shake off old garments, which is the cause of so much doubt concerning a question so self-evident. We oppose this system by the antagonism of *Reason* and *Nature*. It is impossible any longer to countenance the opinion. It must be rooted up. It is like a malignant disease, which can only be cured by extermination. Let it be boldly stated, because it is true, that, as philosophers, we have to deal simply and exclusively with matter. Man neither possesses, nor does he need the possession of any other stimulus than that which is given to the simplest of organised beings. From the lowest and simplest of organised beings, to the highest and most complicated, there is nothing more than a gradual addition of parts, accompanied by concentration.

Can any other facts be advanced to prove that cerebration is merely one of the manifestations of animal life, resulting from a peculiar combination of matter? Yes! we appeal to all animated nature—every physiological fact proves this. If we survey our own structure, we are convinced that each organ has some definite function to perform, and consequently, that each function can be referred to a particular organ. We cannot conceive action independently of cause. Since, then, no manifestation of any power whatever is demonstrable in living beings without being referrible to some portion of their structure, it necessarily follows that cerebration must be considered an attribute of a part of the same structure; and since the phenomena of cerebration have never been seen, except in connexion with a brain, it legitimately and logically follows that the former has a connexion with the latter in the relation of cause and effect.

Survey the leading characteristics of the nervous system in the various tribes.

In the lowest class, the Infusoria, the tissues appear to be homogeneous—there seems to be an absence of cognizable nervous matter. But we must not forget the fact, that the want of power to detect is no proof of non-existence. Even in the human eye, the arrangement of nervous matter called retina would not be visible, if it were not for the other tissues entering into its composition: hence, we learn that it is quite possible to conceive the existence of nervous matter, although of a nature so transparent and unmingled, that it remains invisible to our senses. Analogy would lead us to conclude that there is a nervous system in these tribes. How can we avoid the belief, when, notwithstanding their excessive minuteness, requiring a microscope to display them, we see them discriminate and seize their prey—contract and bend their bodies in every direction—appear conscious of each other's approach—in fact, perform movements with as much regularity and precision as animals who undeniably possess a nervous system. From recent researches it becomes more and more probable that we shall soon be in a position to demonstrate the nervous system in all the infusoria, without distinction.

However, to discard doubtful points: as we proceed to investigate higher tribes, we find nervous matter assuming regular and determinate forms. We perceive ganglionic centres arranged exactly where they are required; and in the centres of these ganglia we find particles of grey matter, which we shall presently see is considered to be the source of power in the higher order of brains. If great locomotive powers are necessary, ganglia are placed in the neighbourhood of the organs destined to serve this purpose. If powerful digestive organs are required, nervous energy is supplied by an assemblage of ganglia round the digestive apparatus. In some a considerable portion of nervous matter is above the œsophagus, and may be considered analogous to the brain of higher animals. In this way we may investigate, till we arrive at the Vertebrate classes, where we find Cerebral lobes and a Cerebellum. Now, in proportion as we ascend in the scale, we observe increased development of these portions, and a greater amount of intelligence; in fact, more perfect Cerebration. The surface of

the hemispheres becomes convoluted, and the arrangement of the white portions increases in complexity. In the brain of the fish there is a want of that concentration so characteristic of the nervous structure of the higher orders. Every nerve terminates in a distinct and appropriate ganglion, and hence the peculiar appearance.

In reptiles we observe a considerable development in the cerebral hemispheres, and a proportional diminution of those portions connected with the sensory nerves.

In birds the brain and spinal cord are developed after one uniform type; and here we have the human brain in miniature: of course, cerebration is found to bear a relation to this development. In fishes the several portions of nervous matter were placed one after the other; but here they are placed one over the other, forming one mass, the cerebral hemispheres covering all these portions supplying the organs of the senses. No doubt this is for the purpose of attaining more complete contemporaneity of action. The hemispheres have not yet assumed the convoluted appearance, but in the interior they present collections of cineritious matter, through which the fibres of the spinal cord pass.

In *mammalia*, the most perfect specimen of which class is man, we find the hemispheres assuming a convoluted appearance, and the number and depth of these convolutions increasing as we ascend from the lowest to the highest. They are, comparatively speaking, absent in the rat, mouse, and rabbit; more distinct in the whale and dolphin; still more in the camel, stag, and sheep; and very strongly marked in the tiger, dog, cat, and monkey tribes. Besides this peculiarity, the distribution of the fibres of the hemispheres becomes more and more complicated, for in addition to the ascending or sensory fibres, and the descending or motory fibres, there are those forming the commissures connecting the two hemispheres; and to add to the complexity, there are those which bring the different parts of the same hemisphere into connexion with one another.

What, then, do we perceive by this very superficial survey of the nervous system? What conclusion is forced upon us? This:—Commence where we will, even at the very zero of animal existence, and ascend to man, there is a gradual increase of size, greater concentration and complexity, and, *pari passu*, a higher order of cerebration. Is not the conclusion logically deduced from the premises? Have we not now obtained possession of a key which will unfold to us new views—open up new thoughts—and solve questions, the want of power to elucidate which has rendered man so long a puzzle to himself?

We investigate the perfect brain of man, and we become acquainted with a most beautiful and complex structure, performing a certain function. Comparative physiological research furnishes us with facts proving the same position. But comparative physiology furnishes us with other facts. We can now prove that the beautiful simplicity and invariability of the laws governing inorganic matter is common to the laws regulating organized matter. The perfect man does not reach perfection by the gradual increase of a perfect form from the commencement; on the contrary, it is capable of demonstration, that the development of his several organs follows certain and invariable laws, and that these organs temporarily assume many forms, which the organs of the lower orders of beings permanently retain. The brain in its development is not an exception to this law. The brain of the most profound philosopher—the brains of Bacon and Newton—of Shakspeare and Byron, during their formation, assumed for a short time the peculiar form of the same organ in inferior beings. Is this a humiliating reflection? By no means. What is the practical application? If we see that the brain of the human being passes during its gradual development through so many inferior types, it is possible there may be a stoppage of development of some particular portion. Such we really find to be the case. Human beings are sometimes born without a brain—in other cases the hemispheres are wanting, and the mass presents the appearance we see in fishes—in others, the posterior part of the brain is developed, the ante-

rior and superior portions remaining very small. Thus we learn the cause of many cases of idiocy; and these views, when fully investigated, may throw a flood of light on the laws regulating the minor modifications of cerebral matter. In some cases of malformed brain instincts present themselves which are never manifested when there is a proper balance existing between the several regions. This was seen lately in a most remarkable way, at Paris.

A peep into Nature's laboratory is an excellent cure for chimerical notions; and one glance at her secret workings will do more to annihilate the fancies and speculations of spiritual philosophers, than the daily repetition of wordy and theoretical disputations.

But our investigations must not rest here. Having examined the nervous organism in the mass, we naturally ask, what is its ultimate structure? This question opens a wide field for research, and a rich harvest remains to be gathered in. When we speak of a nervous system, many other considerations require attention besides the mere external form and size. It would be impossible, *à priori*, to imagine the same formation to extend throughout. A very superficial examination reveals to us two structures. But the application of great ingenuity, and the aid of powerful microscopes, are required to inform us of the ultimate structure of these two tissues; and from this it follows that the diseases—the organic changes, may not be visible without similar assistance. The white matter is composed of millions of tubes—the grey matter formed by innumerable nervous granules—each tube of a certain diameter, and performing a separate and distinct duty—and each granule connected to its neighbour by minute fibres, the two conjoined forming a laboratory for the elimination of nervous power—for the appreciation of various stimuli—and for the secretion of thought.

When we have ascertained the minute structure in a general way, our labour is not finished—we have still to obtain a correct knowledge of the ultimate structure of *individual portions*.

Thus nerves proceed from the organs of the senses to different portions of the cerebrum. Can the ultimate structure of all these portions be the same? It would be folly, and contrary to all analogy to suppose that portions of cerebral matter of the same structure take cognisance of volatile particles, and tremors of the air—perceive the picture painted on the retina, and impressions produced by acids or sugar applied to the tongue. What difference has been detected in the ultimate structure of the convolutions forming the organs of Destructiveness and Benevolence Self-Esteem, and Veneration, Firmness and Philoprogenitiveness? Because two portions of brain appear to possess the same structure, are we justified in assuming that they really do? Motiferous and sensiferous nerves are not to be detected by any external mark, but the microscope has lately removed the apparent anomaly. The ordinary excitation of the nerve of smell depends on the impression of odorous particles on the minute branches of the olfactory nerve. The agreeable or disagreeable smell will depend on the character of the external stimulant; but the reason why the same stimulant should be agreeable to one and disagreeable to another must arise from the peculiar structure of the cerebral organ with which the nerve is in relationship. A difference in the mere peripheral expansion of the olfactory nerve will never account for the peculiarity. Again: why does the same sound affect two persons so differently? To one person the noise produced by sharpening a saw is extreme torture—to another, not at all disagreeable. The sonorous vibrations must come to the ear with the same intensity; and why not the same result? We must seek for the cause of this difference not in the structure of the external apparatus—not solely in the structure of the auditory nerves, but in the peculiar molecular organism of the cerebral organs. We recognise this mode of reasoning when we say some persons perceive particular colours, and that others do not. We do not account for this difference by examining the eye for proof of a different structure, but appeal to cerebral physiology, and obtain the knowledge

that there is a portion of brain for recognising the varied shades and combinations of colours.

The slightest alteration invariably produces a different action. A difference in the direction of the minute tubes, in the thickness of their walls, in their contents, the slightest increase or diminution of pressure, a new arrangement of the grey globules, an alteration in their size and shape—all these changes cannot be detected with the unassisted eye, yet they may give rise to important changes of function.

The improvements which will take place in the treatment of Insanity will emanate from our improved physiological knowledge of ultimate structure. The microscope must be appealed to. Insanity is abnormal cerebation, unhealthy action of a portion of matter. We hear it constantly asserted that the brains of individuals who have been insane for years have been examined, and no trace of diseased structure discovered. But how have these examinations been conducted? Still by slicing piece after piece, by tearing and pulling. The cause is not to be sought for, then, in the general appearance presented by the *brain*; but the healthy ultimate structure of each individual portion being ascertained, the cause of the peculiar form of insanity must be sought for in the aberration from the normal standard of a particular portion or portions of brain. Till this is done, we must remain in the dark; and we would contend, the treatment of many of these cases must be empirical.

Intimately connected with this portion of the subject is the consideration of the form, size, and position of the convolutions. We are too much engaged in attending to the external form of the cranium, and not to the convolutions. Every observer must have noticed the difference in the shape and course of the convolutions in the two hemispheres. Difficulties should be always met fairly. This is a point requiring investigation. We require drawings of the surface of a great number of brains; we should then be enabled to ascertain whether the irregularity was always confined to the same convolutions, and to the same side of the brain. Such considerations suggest the propriety of adopting some plan for the division of labour. In all other sciences this course is followed. Our science might be divided into several compartments, and committees appointed for the investigation of particular questions. Stated periods for the reception of reports might be fixed, and inasmuch as they would embrace all that is known at the time, their value would be increased by their publication and circulation amongst our members; thus diffusing important information, and exciting many to original investigations.

With regard to the development of particular portions of brain, and their respective functions, more particularly with our new assistant, Animal Magnetism, great victories might be gained. To accomplish this certain divisions must be fixed, and individuals appointed to investigate and report on them alone.

There is another subject which appears to me to be forced on our attention: it is the present state of our bust. This has been referred to in a pamphlet published by my friend, Mr. Prideaux. Every portion is included by lines, with scarcely any attention to the natural shape of the organs. If the plan had been pursued of marking the centres of development only, as was done by Gall, instead of marking by lines the presumed outline, which is only to be done in very well developed cases, and should only be figured on the bust, when many cases prove the correctness of the conclusion, we should find a very large portion of the surface unappropriated. This is a subject requiring serious consideration. By the course here alluded to, the stimulus to original investigation is destroyed, by an external appearance of completion and perfection.

I have now to introduce to your notice a subject of surpassing interest—*Animal Magnetism*. We all remember the ridicule thrown on our own science a few years ago, and we are all perfectly aware of the absurd notions which are prevalent regarding this interesting subject. It is not my object to enter into any lengthened detail of the extraordinary phenomena manifested during

magnetic sleep, except in as far as they bear on Cerebral Physiology.

The conduct of the medical profession has appeared to me *most disgraceful, most derogatory*. They have refused to investigate; they have countenanced the attack and the scurrility, and remained satisfied with the assertions of *one individual, who is now notorious for hazarding an opinion on a subject he was profoundly ignorant of*. They have allowed him to make the columns of their own periodical the channel for abusing and denouncing one of the first physicians and physiologists of the day, and one to whom they owe a deep debt of gratitude for many improvements in the practical department of their profession. I regret this, because by education and scientific acquirements they were peculiarly called upon. The public look to them for an opinion on such subjects. The discovery of a new ganglion, the minute structure of nervous tissue, the arrangement of the fibres of vegetable matter, or the recent microscopic discoveries in various organs—all these points are carefully investigated—all these experiments are repeated again and again—comments are made, errors detected, and truth ultimately placed on a firm basis. But how is it with the experiments of the magnetizer? Because they are performed on living matter, and open to the investigation of every one—because they overthrow preconceived notions—because the subject is ridiculed, and, therefore, it is not scholastic to believe—these experiments are not repeated; nevertheless, comments are made, prejudices excited, and Truth left to grope her way, in spite of the efforts of the ignorant and interested.

Having experienced such treatment in the infancy of our own science, it behoves us to avoid a similar line of conduct. The occurrences of the last few weeks would prompt us to be quick in our movements. We find clergymen exciting the prejudices, by appealing to the passions of their hearers, instead of assisting to expound Nature's secrets, by appealing to their reason. We find them breathing forth fulminations against the investigators of Nature. One has published the sermon he preached, in which he denounced magnetizers as sorcerers, in league with the enemy of mankind, because they cannot put forth a scientific statement of the laws by which the magnetic phenomena are produced. If the people are to be excited and prejudiced by religious orators regarding a scientific subject—a subject peculiarly the property of Physiologists, no time should be lost in boldly taking ground, asserting our rights, and thus preventing even the attempted repetition of those scenes and crimes of the dark ages, the result of priestly domination, bigotry, intolerance, and ignorance.

The discovery of the magnetic excitation of Cerebration, as far as I am aware, was made in this country by my two friends, Messrs. Mansfield and Gardiner. These two gentlemen communicated their experiments to me, and I immediately attempted to excite the cerebral organs of one of my patients, who had been regularly magnetised by me for some time, for the cure of disease. Exactly the same results were obtained.

On the 7th October, 1841, Mr. Gardiner, during the magnetic trance of his patient, played a few notes on a small musical instrument; the patient kept time by a lateral motion of the head. He then sounded the instrument without attending to harmony. The patient shuddered, and appeared to be distressed. He interrogated her as to the cause of this distress, she replied she was in pain; and when asked where, she placed a finger of each hand on the organ of Tune, on the same side. I shall not soon forget the enthusiasm of my friend when he communicated this result to me. An apple falling from a tree suggested to Newton the laws by which countless worlds hold their unvarying course; and the muscular distortion of a human countenance suggested thoughts which will assist in unfolding the greatest problem in Cerebral Physiology. After this experiment, Mr. Mansfield returned to Cambridge, where he became acquainted with a gentleman eighteen years of age, exceedingly susceptible of the magnetic influence. The first intimation he had of the fact, that the magnetizer could excite a cerebral organ, was on the 18th of December, 1841.

This patient manifested impaired sense of time. He said, for instance, that he had been in a room half an hour, when he had been there more than two hours, and on another occasion two hours and a half; he would refer to events that had taken place more than half an hour before, as if a few minutes only had elapsed. Mr. Mansfield breathed on the organ of Time, and then asked his patient the same question, when he named the exact period.

On another occasion he was eating his dinner, and became exceedingly facetious, his conversation flowing in a strain of the ludicrous, that was absolutely irresistible. Mr. M. touched the organ of Wit, with the intention of arresting his flow of humour, instantly his countenance assumed a grave appearance, and though his conversation continued, the humorous vivacity and drollery entirely disappeared. After a few minutes Mr. M. blew upon the organ, and immediately the comic strain was again indulged in. The organ of Alimentiveness was paralysed in the same manner, and again excited; also the organ of Firmness. On the 25th of December Mr. M. accompanied Mr. Gardiner on a visit to his patient. This was the first opportunity Mr. Gardiner had been enabled to commence his experiments, and to enter into details, and I am only stating what I know to be true, when I assert that it is owing to his great exertions, his untiring patience, his ceaseless enthusiasm, and his constant anxiety to promulgate truth, that I am enabled to detail to you the leading facts of this extraordinary discovery. He first directed the public attention to this subject in a letter in the *Hampshire Telegraph*.

The cases of my friends are exceedingly interesting, but I think it will be more in accordance with your feelings and wishes, if I confine myself to the relation of my own case.

The case which I am about to relate is that of a young lady, sixteen years of age, who has been confined to her bed for eighteen months. She had been magnetised for some time, and, during the trance, had manifested a number of extraordinary phenomena, but I shall confine my relation to the experiments on Cerebration.

The patient having been placed in the trance, was allowed to remain quiet for a short time. I then simply applied my finger to the organ to be excited, and willed that it should become so. The excitation, in the majority of cases, was instantaneous.

Thus, the finger applied to Imitation produced the most splendid mimicry it is possible to conceive. The words and gestures of friends were copied in the most exact manner. Anecdotes which had been forgotten by all the members of the family, were repeated in a way that brought the circumstances instantaneously to their recollection, notwithstanding many years had elapsed. On one occasion, the manifestation of the faculty was permitted to continue for half an hour, and was then stopped by a waive of the hand over the organ, without contact. The finger on Wit produced immoderate laughter, checked by a waive of the hand, and reproduced by a touch of the finger. The finger on Colour caused the patient to see a variety of colours, which, she said, were coloured worsteds. The finger on Size, caused her to say she saw "heaps of skeins." When asked the supposed weight of the quantity, she replied she did not know. The finger on the organ of Weight caused her immediately to exclaim, "hundreds of pounds."

Self-Esteem, Firmness, Veneration, Benevolence, Philoprogenitiveness, Caution, &c. &c., were all excited with corresponding results. The natural language of each faculty was most beautiful, and the patient in the natural state could not manifest the function in any degree similar.

The organs remained active, even after the patient had resumed her natural state. This was so marked, that the attendants have frequently requested me not to demagnetize the organ of Benevolence, because, when this was allowed to continue active, she was so much more kind and affectionate.

Mr. Atkinson, Mr. Brookes, Mr. Prideaux, Capt. Vallant, and Dr. Elliotson, have all obtained si-

milar results, and experiments have been made in America which also prove the truth of these statements.

By a perseverance in these experiments several new organs have been discovered; but it would be premature to publish the results of a few experiments only. The object is to excite attention and inquiry, and to remove prejudice.

Who can foresee the application of this astounding discovery? Do we not obtain a glance of a new method of treatment in cases of insanity; and are we not furnished with a means of exciting the cerebral organs, which may prove of vast importance—may possibly prove to be a mighty power in the hands of those to whom the education of youth is entrusted? Shall we, then, allow ourselves to stand convicted of moral cowardice? Shall we refrain to publish these discoveries, because they are new—because they are strange—because they astonish us? Are we not lovers of truth? True, we know little about the matter; but therein consists the incentive to action—therein lies the stimulus to research. Shall man, whose present amount of knowledge may be compared to a grain of sand in the field of immensity, dare to laugh, scorn, and ridicule, the attempts to evolve one of Nature's secrets? The Cerebral Physiologist who does this is a disgrace to the body he is ranked with, because he embraces a philosophy which loudly condemns such a line of conduct. He is not a degree removed from that Professor of Physiology, and that instructor of youth, who acknowledged there was "something" in Magnetism, but refused to publicly avow his belief, for fear he should lecture to empty benches.

We find, then, that the last facts advanced still support our first axiom, viz., that Cerebration is the function of the brain—one of the manifestations of animal life, resulting from a certain peculiar combination of matter—that it is not peculiar to man, but is exhibited, in a greater or less degree, by all the gradations of animal life. I am the more anxious to strenuously insist on the reception of this axiom, because on this basis the science of Cerebral Physiology is elevated. All Cerebral Physiologists should inculcate this view. Let it be once understood that all the actions and all the thoughts of men are the products of material changes; let Education be conducted on this belief, and a new era will dawn—a gross error will be removed, and very soon, all the minor errors, pernicious accompaniments and consequences, will disappear with it. Let no Cerebral Physiologist say his science is purely inductive, and, in the same breath, speak of "the mind" of man, for he cannot bring forward a single fact to support his position. These two facts cannot be too strongly impressed on the attention of our race:—

1st, That man's actions necessarily result from his organic constitution.

2ndly, That man has the power of modelling his organism, so as to produce, by a series of combinations, a high moral and intellectual character, or a character decidedly the reverse—in fact, that the existing state of society is his own production, and that he can either exalt or depress it, by attending to, or neglecting the laws governing his structure.

As one truth prepares the way for the reception of another, so the knowledge of the fact, that the brain is all that is necessary for sustaining man in his position, opens the door to a number of dependant questions and considerations, which are forced on our attention, because they are the necessary sequences of the preceding axiom.

For instance, how much more intelligible and important do the laws of hereditary descent appear?

Man has power over matter; but to use that power, he must conform to the laws governing matter.

Man has power over himself and his fellow-man; but to wield that power, he must investigate, ascertain, and conform to the laws presiding over organic life.

Has he done this? To a limited extent. Man knows this truth, and acts in accordance with it, when employed in developing and perfecting other beings; but as regards himself, the most important consideration, he wilfully neglects the few laws he has discovered, disdainfully turns aside from the

innumerable facts daily presented to him, and thus retards the progress of his race. How is this to be explained? One reason is evident. He has been weighed down by a spiritual philosophy; he has been taught, and still believes, that he possesses "a mind"—that this presiding principle suggests and proposes modes of action; in fact, that he is a being of a higher order, in the possession of something besides his organism, the cause of his superiority.

We must keep constantly before us the opinion expressed in the commencement of this Address. We are Natural Philosophers—not bound to reconcile our views with existing notions and opinions, but to state what we conceive to be truth. Man's actions and thoughts are the necessary result of the activity of his cerebral organism, and the cause of the peculiar form of his cerebral organism, and the resulting modified actions and thoughts must be sought for in the laws of Hereditary Descent, and the kind of cerebral training adopted. We know, from abundant observation, that the brain can be altered in shape; and if the laws referred to were only followed out in their broad features, society might be remodelled, in the course of three or four generations.

High moral and intellectual preeminence is now the exception, and not the rule: man could soon reverse the picture. The brain can be improved by judicious training; and remember, the neglected training of one individual brain may exert an influence over several generations. We would wish to fix our position on this enlarged view; we would consider this question as philosophers and philanthropists, not as sectarians—not as affecting the individual, but as appertaining to man in the aggregate.

The laws of organic life are like all the other laws man has discovered—invariable. The same causes always produce the same effects.

Observe individuals possessing superior brains—members of Nature's aristocracy. Why do they differ from the greater portion of their race? Compare the distinguishing characteristics, the elevated grandeur, the high moral and intellectual attainments of the one, with the grovelling debasement, the notorious animal exhibitions of the other. What causes have conduced to produce this difference? Have we discovered the cause? Can we apply the knowledge obtained? If we can, who will limit the application? Why may not *the race* ultimately become partakers of the same improved organism? Reasoning as philosophers, we have everything to hope for, and nothing to regret but the continuance of ignorance and apathy. We pity the man with his cold, withering calculations, placing limits to man's progression, fixing his race to the narrow confines suggested by his own limited power, and mapping out its future career by the experience of the past, the perverted activity, the monstrous prostitution of mere animal powers.

If we are asked, Has man unlimited power? we answer, we know not his powers; we, therefore, cannot fix limits to his progress. If the few have gained their position by any ascertainable means, we cannot see why the many may not reach the same standard. If the stimulus has been applied to some, and such astounding results obtained, we cannot see why the mass of men should not be elevated by the same vivifying process. The fact of human progression can be ascertained from history; but the laws of human progression are not understood, and their deduction from the study of materiality not believed. It is too much the custom to lower, to degrade, to underrate man—to speak of his proneness to vice—his innate depravity—his grovelling tendencies, but not of his *inherent power to become virtuous*; to refer to his derelictions from a standard of morality, as so many proofs of a sinful constitution, instead of tracing effects to causes, and becoming convinced that all these manifestations depend on, and are the necessary results of ignorance, and a total disregard of important physiological truths. It is our duty to insist on this—to cast new light, and thus remove the blindness which perpetuates these views—to teach that man is to be elevated, not by vainly theorizing, not by lukewarm and irresolute speculations, but by adopting vigorous and efficient plans, based on the laws governing his organism. Let

the rising generation be educated in physiological truths, not only teaching them the best means of preserving and improving the constitution transmitted to them, but let them be taught Cerebral Physiology; and, above all, the important fact, that the formation of their descendants can be calculated with mathematical precision, provided science be consulted, provided intellect be the guide, and not mere blind animalism. These are truths of more importance to the individual and to the race, than a knowledge of the fooleries and absurdities of modern society—than the derogatory employment of copying the last ridiculous fashion, or the studied forms and monstrous attempts to attract the attention of the vulgar or the refined.

When high moral worth and intellectual superiority shall be the standard, the eminence to which all shall aspire, the ornaments of the present age will be considered the vulgarities of that which is to come. The improved organism, the inevitable result of consulting the natural laws, will give improved tone, and there will be a natural, unstudied gracefulness and simplicity, far more enticing, far more beautiful than the unnatural, nonsensical perversions alluded to.

Again: how do these views bear on criminal jurisprudence? Our law-makers manufacture laws, and our judges apply them, but both parties are totally ignorant of man's nature. Certain views have been entertained regarding man, and the best means of governing him; time has consecrated them, and the reformer who undertakes to enlighten his race on these questions, notwithstanding he bases all his views on man's nature, is denounced as the pest of society. Napoleon observed, that "the people of a nation were not deserving of better laws than those they submitted to." This is the language of a tyrant—this an extract from the code of a ruler, ruling by brute force. How long will the people of this country submit to the infliction of injustice, to the punishment of diseased individuals, for actions the necessary result of the activity of an imperfect organism, transmitted to them by parents who were allowed to continue enveloped in the grossest ignorance? This will depend on our exertions. We have pointed out the rational mode of proceeding, and we must not cease our endeavours till we succeed in every particular.

The recognised instructors of the people teach that the gift of *mind* is to the foolish as well as the wise, and that according as it is neglected or used, must be the consequences, be they what they may. Believing and inculcating the doctrine, that man has the power of framing his own line of conduct, they take upon themselves to punish man for any dereliction from a certain standard. They punish a being for a certain act, because they are ignorant, and cannot point out the cause of its performance. The means they use to prevent a recurrence, is terror and punishment—if these fail, annihilation. Vengeance can destroy the being, but will never reform him; it can destroy the vitality of cerebral matter, but it will never prevent certain actions resulting from certain combinations.

If this be true regarding the individual, it is equally true as regards the community, and it is foolish and unjust to punish offenders with the hope of deterring others by the example. Surely the occurrences of the last century will prove this! Recall the thousand gibbets, and the thousand specimens of humanity dangling from their centres—the scaffold reeking with human gore—the wheels and the mangled limbs—the galley and its thousand occupants—the jails, and the penal colonies, and all their attendant horrors. Is there less crime, less violence? Is man informed by all this exhibition of animalism what his duties are? Should we subdue a furious lion by destroying daily in its cage one of its own species? To tame this beast we study its nature; to tame man we must follow a similar course. Is not the spot polluted by our executions crowded by an assemblage of organisms similar in many respects to the one we are destroying? The majority of those who attend these exhibitions of brute force require care and attention; the stimulus they there receive is like water to a thirsty man—it is pleasurable, and differs only in degree from the excitement they re-

ceive from a bull-fight, or the struggles of the boxing ring. We denounce the bloody amusements of the Romans, and refer to them as examples of a barbarous age; but in what consists the difference between the spectator two thousand years ago, witnessing and rejoicing over the gasps of the dying gladiator, and the man of yesterday, cheering, hooting, and then beholding the convulsive throes of the gibbeted convict? The one fought for a garland and for victory, prompted by a false standard of glory—by the inordinate animalism of the wealthy Roman; the other is destroyed by sanguinary laws, because he has committed a crime, because he followed the impulses of an unfavourably developed organism, and is therefore a *moral patient*, because it is more easy to crush than to remodel.

Is this a test of civilization? Is this a proof that our rulers understand man's nature? If we wish to know the stage of civilization reached by a people, ascertain whether they are obeying the laws governing their organism, whether they have acquired the important knowledge of the connexion between them and their own happiness. Civilization is not to be measured merely by the amount of luxury, by the increased accumulation of comforts, or by the numerous victories achieved by Science, annihilating time and space, and really, in fact, rendering the whole race members of one community; but the great test of civilization is the progress made by a people in those refinements of social intercourse, resulting from moral and intellectual improvement, is the extent of the inculcation of those laws and those principles which tend to elevate the many and not the few, which have for their object, and embrace in their fullest scope, every circumstance calculated to impart the greatest amount of happiness and freedom.

As Cerebral Physiologists, we must insist on the application of the principles of our science to the important question of Criminal Legislation; by no other means will it be cleared of its difficulties, and in no other way will those unfortunate beings be properly protected, who are continually rendered amenable to the laws of their country. The rulers of this country have yet to be taught that a man's conduct is the inevitable result of his cerebral organism, modified by the circumstances which surround him at any stated period.

It is the universal appreciation of this truth, marked in strong and indelible characters on the skull of every human being, which constitutes the power by which the criminal code of this and every other country is to be reformed. Undoubtedly these views are not generally entertained, but they are making rapid progress, and, like the silent march of truth in other departments of science, will ultimately overcome all opposition. Such views suggest the necessity of treating criminals as *moral patients*. It is as irrational to punish a criminal for conduct resulting from an unhealthy brain, as to punish a child labouring under rickets and distorted limbs for falling. Is it optional with the child to possess healthy, well-formed limbs? Think you it is optional with the criminal to be, or not to be, guilty of a crime? The preceding views evidently tend to point out the folly of such an opinion; and having proved that the committal of the crime is not to be attributed to the free-will of the culprit, the next question is, How is the tendency to crime to be removed? In this consideration, what an important position do the laws of Hereditary Descent occupy? Of what value the preceding observations! A boy with a malformed brain commits a crime—the law immediately punishes him; but till lately, and now only to a very limited extent, we adopted no plan of arrangement at all calculated to remove the disposition to repeat the offence. How came the boy to possess this brain? To the ignorance of how many generations is it to be attributed? Did society take especial care to educate his parents? Did they know that they possessed a peculiar conformation of brain, which of necessity they must impart to their offspring? No! they were allowed to remain ignorant; they were permitted to bequeath to society a being not only useless, but absolutely dangerous. Eagles never give birth to doves. The juvenile patient, then, with such an organism, and surrounded by certain external circumstances, is

pushed on to the performance of certain actions called criminal, but which, we say, *are symptoms of disease*, and require appropriate treatment.

Now, the boy is sent to jail. What is done there? Is any moral lesson taught? Is any example presented by which he may regulate his future conduct? No! He associates with others like himself, and perhaps a great deal worse. His propensities are roused, his moral powers untrained, his intellect unenlightened. He associates with those who laugh at the laws of society, who scorn virtuous resolutions, whose whole energies are directed against morality and industry, and who feast on the reports of successful villainy, and the practice of sensual indulgence. His period of confinement expires, and what becomes of him? He is ejected, seeks out his former companions, and again becomes an adept in vice and every species of profligacy. Is the disease cured? Has confinement diminished the natural tendency to the production of diseased manifestation? If Cerebral Physiology were properly understood, could this one, selected from many abuses, exist another year? If you wished to cure a passionate child, would you allow it to associate with those of a like temper? If you wished to check the progress of a contagious disease, would you commence your endeavours by allowing patients of all kinds to mix indiscriminately? An ill-formed or diseased brain is a fountain pouring forth successive streams of impure produce. An individual possessing such a brain, if placed in a situation where the animal passions are allowed to run riot, will never be guided to virtue. The sapling, tended with care, may be made to grow straight, but the old tree, aged in its deformity, alters not. How different would be the effect if the boy, at the moment of his dereliction from a moral standard, were placed in an asylum from which temptation to vice was excluded, and in which the highest moral and intellectual training was administered!

The present state of our criminal laws is a speculation; it is worse, for it has not met with the fate of most unsuccessful speculations, that of being overthrown. The legislature will not make use of the only obvious method for the removal of the evil; its sole attention is directed to the effect, the cause is disregarded. These are subjects on which our rulers have not thought of—they have no philosophy to guide them—the whole force of the laws they have made has reference only to punishment, and the criminal will never be reformed by such means.

But how numerous, how endless the applications of our science! There is not a subject appertaining to man, either with reference to his present state or future progress, or as regards his formation, his education, or his government, which is not dignified and enriched by the illustration it affords, by the clear and philosophical views it enables us to take of difficult and intricate questions. It builds a foundation on which we must erect the machinery which is to propel onward and onward our race—it affords the means by which we are to remove all the impediments to our advance—it insists on the adoption of principles and laws applicable to all nations and all climes, and will morally hasten and consolidate what the physical sciences have nearly accomplished—the approach of an universal brotherhood. It advocates freedom, and abhors tyranny—it recognises the free and unrestrained manifestation of thought—it matures all views, and patronises all schemes calculated to increase man's happiness, and would banish once and for ever the remnants of barbarism, the relics of a debasing animalism.

Is this not an exciting theme? Are we not bound to use all our exertions to advance such a cause? Yes! The wedge has been introduced, and it must be driven home. Opinions have been promulgated, and they must be countenanced and enforced. Immense numbers acknowledge the truth of certain principles and axioms, but they are afraid to work them out. In private they applaud certain views and reasons—in public they are cowards, and shrink from the avowal of their opinions. The remark of Plato is still applicable, although ages have intervened—"The eyes of the multitude are not strong enough to look at truth." But this must not continue. If this be true of the mass, let it

not be said of Cerebral Physiologists. We must dare be men. In this boasted free country man is yet a slave—is still afraid of his fellow-man. The frown of Power can crush the most superb intellect, and prevent the utterance of thoughts calculated to invigorate the drooping energies of kindred brains. In this land of liberty, the first touch of our shore infuses freedom into the enslaved muscle, but binds tighter the fetters surrounding thought—bids the trembling captive assert the rights of humanity, but prevents the free action of the organ, the cause of his superiority. We vote millions of our treasure to unchain limbs, but make our judges persecute men for their opinions and thoughts—in theory and outward appearances encourage candour and free aspirations, in practice and the secret workings of our institutions, render men hypocrites and slaves.

But there are some who laugh at our efforts—who treat our views as chimerical, and our ideas of progression as Utopian. These are the drones of society—these are they who first opposed all attempts at education—who stated, "after all, education is but teaching us to do evil in the best possible way;" and now, because the meagre nature of the supply, the miserable pittance dealt forth, prevent the result from becoming immediately apparent, think they are safe in denouncing all who entertain such views as enthusiasts and vulgar zealots. Ye drones! look to the past history of your race. Do ye not observe that man is a progressive being—that the improbabilities and supposed chimeras of one age become the facts and scientific truths of the succeeding; and the limits, if there are limits to change and progression, men cannot foresee or predict.

Ye drag-chains to social improvement! it is ignorance that prompts you to declare that man is to remain "degraded," "radically depraved," "desperately wicked," that all his labours, let them be ever so Herculean, will not make him a better being, or raise him one degree nearer perfection.

We scout such opinions, and we hail with surpassing joy the promulgation of a sounder philosophy; we contend that happiness is not incompatible with humanity, but we know that, inasmuch as the arid waste differs from the fertile field, so does man as he is differ from what he might be.

Our task, then, is to give the means to be adopted, to teach what *is in man*, to insist on the inculcation of this truth—"Man, know thyself—all wisdom centres there;" and, above all, let each individual of our body be animated by this influence.

— "To thine ownself be true;
And it must follow as the night the day,
Thou can'st not then be false to any man."

COURSE OF LECTURES ON THE THEORY AND PRACTICE OF MEDICINE.

Delivered by C. J. B. WILLIAMS, M.D., F.R.S., Professor of the Practice of Medicine, and of Clinical Medicine, at University College.

GENTLEMEN,—A remarkable circumstance connected with the aerial poison giving rise to endemic diseases, is that of its absorption by water. Of this we have a proof in the fact that persons whose habitations are separated from a marsh by an extensive lake, generally escape the ague that may be prevailing on the side of the lake near to such marsh.

It has been noticed, also, that trees have the power of attracting and entangling, in a great measure, the malarious particles; so that persons living in the immediate vicinity of trees, in an ague district, are particularly liable to suffer, whereas others residing farther from the district than the trees, have a fair chance of immunity.

The origin of the poisonous material is undoubtedly the *decomposition of vegetable matter*; and, to effect such decomposition, a certain amount of *heat and moisture* is necessary. If the heat is very intense the substances are desiccated and not decomposed; so, again, if the quantity of water lying upon the marsh

is excessive, the decomposition is likewise impeded, and thus ague does not prevail most after either very hot or very wet summers.

Endemic diseases are also sometimes produced by exhalations from stagnant waters, cesspools, &c., where collections of offensive matters have long existed.

Endemics may be said to be characterised by three particular features; viz., 1st, They prevail only within *certain limits*. 2nd, The districts affected are *similar* in their *physical* peculiarities; and 3rdly, the precaution of separating the healthy from the sick *within* the district cannot at all diminish the disease; whereas, *removal* from the district is almost a sure preservative from its influence.

Epidemic Diseases.—These differ from the class that have just been under consideration. They do not return regularly at the same seasons, nor do they attack only special localities, but may arise suddenly, and prevail over a whole country without any assignable cause, and then rapidly subside. They are supposed to be due to something in the atmosphere, seeing that it is the only thing common to the whole country. We find certain winds favourable to the development of certain maladies; thus, for example, croup is often prevalent during winds blowing from the east. Then, again, we find that influenza has a great tendency to become epidemic when a long-continued east wind suddenly changes to a south-west; but this is not always the case. Influenza may be epidemic at any period of the year, without reference either to temperature or season. There appear also to exist certain epidemic states of the constitution at certain times, giving rise to various types of disease. In some epidemics, for instance, there is unusual weakness of the system—in others, there is unusual excitement; hence, we have at one time typhoid or adynamic diseases, and at another time strictly inflammatory ones. In the year 1838, what we term the hæmorrhage diathesis was very prevalent, and fevers then occurring were prone to assume a petechial character. Now, it is obvious that if our treatment is to be successful, we must study the particular feature of each epidemic, for remedies that would prove most efficacious in one might even produce fatal results in another. About 20 years ago there was a remarkable tolerance of blood-letting, and hence Dr. Armstrong's practice was then so beneficial; but if the same course was followed in a typhoid epidemic, we see that most injurious consequences must result.

The physical cause of epidemics has not yet been discovered—it is nothing that the barometer or thermometer can detect. We commonly say that it is a poison existing in certain atmospheres; but this is only conjectured, not proved.

3rdly, We shall make a few observations on *contagion*. Contagion is only known by its property of exciting disease; of its real nature we have no conclusive information. The term is applied to the communication of disease from one person to another, either by contact (which is strictly contagion) or by inhaling the same atmosphere, which is called *infection*. It is evident that, in the latter case, there must be something evaporable that becomes associated with the air. The difficulty is to understand how the contagious matter is propagated. Fermentation and organic generation are the only analogous cases in Nature; some have accordingly supposed it to be a sort of ferment, while others think it is due to generation—that ova are carried about in the air, deposited on the body, and after a time called the period of incubation, become developed, and by some means or other give rise to the same disease as that from which they themselves originated. I am inclined to agree with the latter sup-

position as most probable. In some diseases, such as scabies, morbus pediculosus, and porrigo favosa, insects have been detected. For a full account of this subject I must refer you to a paper written by Dr. Holland.

There are various degrees of contagion: the first, or highest, is that wherein the air in the immediate neighbourhood of the patient suffering is impregnated, so that healthy persons coming into it contract the disease. The second degree is that in which the poison is communicated by actual contact only, as is the case with scabies, &c. The third degree is where not only the contagious matter is applied to the body, but must be applied to some particular part of it—viz., absorbing surfaces: thus, for example, small-pox may be communicated by introducing some of the matter into the eye; hence the term inoculation. And, fourthly, the lowest degree of contagion is seen in cow-pox, where, to ensure the propagation of the disease, the matter must be conveyed directly into the circulation.

One point in favour of the insect theory of contagion, is the fact that the substances which are unfavourable to organic life are also destructive of contagious influences; this we find illustrated in the operation of chlorine, &c.

Some persons have thought it advisable to deny contagious propagation in any cases, but the error of such an imagination need not be pointed out. I shall now mention a few of the proofs of contagion. 1st, Cases of contagious diseases occur in groups; one or two persons become affected in a particular district, and then from these persons the affection spreads; but neighbouring districts, although having precisely the same characters, may be entirely free. 2ndly, The situations in which these diseases occur vary considerably. They do not spread and cease with the rapidity of epidemic maladies. 3rdly, We can often trace the commencement of the disease to some person who has had communication with those affected in some other situation. It is quite certain that clothes and porous bodies are able to convey the contagious matter: hence the establishment of quarantine. 4thly, Those who have most intercourse with the sick are most subject to the influence of the disease. 5thly, When the afflicted are carefully separated from the healthy, and purifications are employed, the ravages of the disease become much limited.

It is said that all who are exposed to the poison are not necessarily infected. This is quite true; but it would be as irrational, therefore, to deny the contagious nature of the particular disease as it would be to deny that fleas have a tendency to bite, because some persons may sleep in a bed containing fleas without being bitten.

We now pass on to the consideration of the *nature of the disease* itself.

The study of the physiologist consists in an investigation into the mechanical, chemical, and vital properties of the body and its parts in a state of health. The pathologist has precisely the same duty to perform in a state of disease.

Irritability, sympathy, tonicity, sensibility, and the power of secretion, are elementary, primary, or ultimate principles of health. The vascular system, nervous system, secreting system, muscular system, and the blood, are the proximate elements of health. Now, we shall find that the ultimate elements of disease consist in a perverted state of the ultimate elements of health; and that the proximate causes of disease imply the peculiar and altered condition of the proximate elements of health.

Diseases are divided into those that are *functional*, and those that are *structural*. We shall first attend to the former—they are the more

simple. *Functional* disease consists in a deviation from a healthy standard of the actions constituting the proper office of the part; they may be supposed to be very varied, when we remember the varied nature of the functions. The first element we shall consider is *irritability*, or the property that muscular fibre possesses of contracting upon the application of a stimulus: This property may become *excessive*, and then muscular contraction will be inordinate or convulsive. The excess may consist either in strength or rapidity of contraction; the latter is the most common—an example of it is found in the irritable heart, whose actions are rapid and easily excited, the fibres being in a very mobile state; but yet its power is not greater than in health, and consequently the force of the circulation is not increased.

This same condition is also shown in the great irritability of the alimentary canal, giving rise to diarrhoea (Lienteric), and also in incontinence of urine, resulting from irritable bladder.

We have an instance of the opposite state, viz., defective irritability with regard to quickness in the slow, torpid pulse of the apoplectic subject.

Then, again, we find an illustration of *increased force* in the extraordinary power sometimes manifested by persons labouring under great mental excitement; also in the strength of the heart's action under the influence of inflammatory fever.

The reverse of this state is seen in the loss of contractile energy in the voluntary muscles during the presence of a fainting fit, and also in the relaxed condition of the muscular fibre, after the system has been debilitated by long illness.

In the healthy state, the contraction of a muscle is soon followed by its relaxation. Sometimes, however, there is great irregularity in these intervals, and an active state is kept up with the intervention of occasional relaxations; this is termed *clonic* spasm, and is seen in chorea and epilepsy. But sometimes the contraction is not followed by relaxation at all, and then it is called *tonic* spasm; of this we have an example in tetanus. It is seen in a moderate degree in the voluntary muscles in cases of catalepsy. Death in tetanus arises from the tonic spasm, causing pressure upon the respiratory apparatus, and thus destroying its functions.

These muscular affections are so intimately associated with the nervous system that they often obtain the name of *nervous* diseases.

The next element is *tonicity*, by which is meant a contraction of a slow and gradual kind, not necessarily followed by relaxation. Thus, if the muscles of one side of the face are paralysed, the tonicity of those of the opposite side acting without any antagonism will cause traction of their side from the original median position. It is by this tonicity also that the middle coat of the arteries contracts, and causes them to be found empty after death. This tone is essential to health: when it is deficient, we find the muscles in a weak and flabby state; the pulse, too, is feeble and unsteady. This condition is well indicated by the time that elapses between the pulse as felt at the heart and in the radial artery. In a state of health, the interval is scarcely appreciable; whereas, in cases in which the tone of the arteries is impaired, there may be a very marked irregularity. We also find a want of energy in such subjects, extending to the system generally, all the functions being sluggishly performed. There is, moreover, a great liability to derangement of the circulation from any sudden alteration in position. The treatment applicable to this impaired energy is obviously *tonic*; such as is

calculated to brace and invigorate the system. One of the most valuable agents in accomplishing this object is *cold*, which, as we have before seen, restores the action of the minute vessels when used in moderation. There are also medicines that have a direct bearing upon increase of tone in the muscular fibres.

TO CORRESPONDENTS.

G. H.—We have no more settled maxim, in the management of our Journal, than that we are not responsible for the opinions of our Correspondents. On questions of fact we are, to a certain degree, answerable to our readers: on matters of opinion, the whole responsibility rests on the avowed writers.

Professor Owen's Lecture on the Nervous System, and Dr. Elliotson's case of the cure of palsy, of several years' standing, by Mesmerism, will appear in our next number. Our "Pencilings of Eminent Medical Men," with some other of our customary papers, will be unavoidably postponed till we have completed our account of the meetings of the Medical Section of the British Association.

Theta's Letter on Medical Reform will appear in an early number.

Mr. E.'s case is excellent. We shall be glad to hear frequently from the same quarter.

Dr. Gore.—Dr. Scoffern has written a very able work on the subject, which he has entitled—"Chemistry no Mystery."

* * Our Subscribers are informed, that the rule is to pay in advance. There are several subscriptions which (expected for some time) have not yet reached us.

THE MEDICAL TIMES.

SATURDAY, JULY 2, 1842.

— "Dum loquimur fugerit invida
Ætas."

WHATEVER our prepossessions, Mr. Guthrie seems resolved to make us like him; and certainly, if he continue to employ his activity in such laudable efforts to oblige as we have this day to notice, there will be no very pertinacious attempt, on our part, to resist his attractions.

Our readers know—many from personal experience—of what deep concernment to the members of our Profession, and still more to the unfortunate Sick Poor committed to their care, are the pecuniary regulations by which the Poor-Law Guardians administer medical relief. Less, perhaps, as sentinels on the watch-towers of the Profession, than as anxiously sympathizing with such of our wretched countrymen, who, in the dread hour of sickness, find themselves helplessly dependant on the law for their every comfort and aid, we considered it our especial duty to raise and keep alive attention to the fearful results which common sense essentially connected with the miserable inadequacy of medical remuneration enacted or countenanced by Poor-Law Authorities. This was, however, but one of the evils arising from the medical arrangements of the present Poor-Law; there were others that related to the size of districts, the qualifications of the medical authority, and their tenure of office. On all these matters—if we are well assured—we have now pleasing information for the Profession.

The President of the College of Surgeons has received from Sir J. Graham, and Mr. G. C. Lewis, a communication, announcing that they have assented to all the propositions which he had made to them on the part of the Council "for the relief of the members of the Profession who were suffering under the regulations now in force," and that everything would be settled in future to his entire satisfaction. This important piece of information was (we learn) officially communicated to the Court of Examiners on Monday evening, by Mr. Guthrie. We are not yet enabled to say decisively what, and how great, are the concessions made by the Poor-Law Commissioners; but we believe that we are not wrong in surmising that they have adopted a uniform principle by which medical remuneration shall in future be governed, and that there will be a very considerable increase in the average amount of medical salaries on the mode of payment. The opinion entertained by the Council and by the President, is, we understand, the one advocated by ourselves, viz., the enumeration of all persons, who, on a liberal estimate, should be entitled to gratuitous medical assistance, and the allowance of a certain sum, varying from two-pence to six-pence per head, according to the extent of district or density of population. Whether Mr. Guthrie recommended this plan to the Poor-Law Commissioners we are unable to say; it seems, however, more likely that sacrificing his preference of what was an improbable **BEST**, to the policy of securing a real tangible good, he advised a liberal per case system of remuneration.

In either case it is gratifying to have the assurance that the Home Secretary concedes all that is asked of him.

Although unwilling prematurely to laud results, the character or extent of which we are not made precisely acquainted with, we should yet feel ashamed of ourselves if we allowed any political bias, or bygone expression of differences of opinion, to stifle the expression of the gratitude and high satisfaction with which we regard the laborious, the useful, and, as it would now appear, remarkably successful exertions of Mr. Guthrie. Five months ago, when we first drew public attention to the position of Poor-Law medical officers, we were little sanguine of such extensive improvements in so short a period. The independent Medical Press has, no doubt, had its share in hastening so happy a consummation; but giving honour where honour is due, let us gladly own that the great and principal merit belongs to Mr. Guthrie, who, by his active services, in this special matter, has preeminently entitled himself to the Profession's gratitude.

Ambubaiarum collegia, pharmacopolæ,
Mendici, mimæ, balatrones: hoc genus omne—HORACE.

WE have before us a rather singular description of the position and prospects of

the "Pharmaceutists," drawn by the pen of Mr. Jacob Bell, Editor of the *Pharmaceutical Journal*. We embalm and mount a few of the more prominent features, with the view of examining them more microscopically on a future occasion.

After announcing the importance of raising the character, and assimilating and identifying the practices of chemists and druggists, the Editor tells us:—

"A line of business which, in one locality constitutes a leading feature in the trade, is considered in another to be derogatory and unprofessional. The manner in which business is conducted among some of our members, is, by others, repudiated as approaching to empiricism; and the course which is adopted by some to raise their reputation, is avoided by others from an idea that it would have an opposite tendency."

The druggists are then declared to occupy a medium place between grocers and apothecaries:—

"In many towns (he proceeds) the druggists invariably fit up one side of their shops with grocery and spices, while, on the other side, they carry on the business of dispensing chemists. This practice is, under present circumstances, unavoidable; and if the business of the chemist be creditably conducted, the sale of grocery ought not to be considered to detract from the respectability of the establishment. The sale of oils and colours is also a collateral branch of the business of chemists and druggists in the country." * * * "In the preparation of colours for artists, much chemical knowledge is required, and in places where the demand is not sufficient to support a colourman, the office naturally falls upon the chemist." * * * "The sale of patent or proprietary medicines, which is generally conjoined with retail business, is a department which ought not to be made prominent. The principle involved in the sale of such medicines, namely, that of recommending 'infallible specifics,' for various disorders, is not in accordance with sound medical knowledge, and in some cases amounts to dishonesty and imposition." * * * "The retail chemist, however, is not responsible for the efficacy of these medicines, or the accuracy of the panegyrics; he is not supposed to be acquainted with their composition, or to give any opinion in the matter. He is only the agent, and the purchaser buys the articles on his own judgment, and at his own risk." * * * "The preparation of horse and cattle medicines deserves more attention than is usually bestowed upon it by pharmaceutical chemists." * * * "There is no just reason for considering this branch of the business derogatory to the pharmaceutical chemist; and in order to place it on its proper basis, it is only necessary to conduct it in a respectable manner, and thus to overcome the prejudice which prevails on the subject. An occasional exposure of existing abuses is likely to be useful in this instance as well as others."

The author then properly infers:—

"It must, therefore, be acknowledged that in all these cases the test of respectability and professional character has reference more to the education of the parties, and the manner in which they perform their duties, than to the precise line of business in which their abilities are directed."

Mr. Bell now proceeds to deal with the effects of this system, and seems half indignant, that when nearly all town and country chemists are grocers, that some grocers become chemists:—

"It is, however," he says, "difficult in some cases to distinguish by any outward sign the true chemist and druggist from the person who assumes the name without possessing the qualification."

He considers that this will be remedied by the diplomas of the Pharmaceutical Society, which, though given to any man sending a guinea for one, he thinks, in a few YEARS, will be a mark of distinction, and a TEST OF PROFICIENCY. He owns, however, that—

"We may feel conscious that few among us are as near perfection as we could desire, and yet we are bound to consider that all existing chemists and druggists are to a certain extent qualified, and as such are entitled to admission."

And continues:—

"We would also suggest, that a *too prominent* display of the insignia of membership, or an *ostentatious* allusion to the PHARMACEUTICAL SOCIETY in public advertisements, is calculated, especially in the present early stage of its existence, rather to call forth animadversions from parties who are disposed to be censorious, than to confer that kind of character on the advertiser which it is his object to acquire. This is more particularly the case when such advertisements have reference to those subsidiary and collateral branches of our business to which we have already alluded. Our attention has been directed, in several cases, to shop bills, in which oils, colours, grocery, brushes, and patent medicines were enumerated in a very conspicuous manner, the words 'Members of the Pharmaceutical Society,' being equally prominent." * * * "We have also seen on such bills the words, 'Medical advice gratis;' the advice alluded to being given by the chemist himself. This we consider to be exceeding our legitimate province. We have on many occasions been called upon to advocate the privileges and rights of chemists and druggists, and to prove that a certain *discretionary power* must necessarily belong to us, in recommending or suggesting remedies in our own shops, when regular medical advice either cannot be obtained, or is not required."

We finish with one more quotation:—

"There are many chemists who are in the habit of bleeding, cupping, applying leeches, and drawing teeth, and we have seldom heard any objection raised by the medical profession against this custom."

And to these "sugar-vending," "brush-selling," "oil-and-colour disposing gentry,"—these "patent-medicine agents,"—these "perfumery and tooth-and-nail-brush tradesmen,"—these "horse bolus-makers,"—these "medical-advice-gratis donors,"—these "bleeding, cupping, teeth-drawing, leech-applying, brush and door-mat sellers,"—the qualified apothecaries, the examined surgeons, are to abandon their honourable profession! The druggists were never well painted till they painted themselves.

LECTURES ON CHEMISTRY.

By JOHN SCOFFERN, M.D., Lecturer on Chemistry at the Aldersgate School of Medicine.

It was suggested, in a lecture some time back, that evident heat might probably be nothing more than a series of vibratory motions in some elastic medium. You will scarcely have discovered, hitherto, any fact tending to strengthen

this theory; but the properties now to be mentioned of radiant heat cannot fail to strike you as being analogous to those of light—an agent which every fresh observation tends to prove must necessarily be vibratory.

If I stand before a fire-place, such as a grate or stove, containing fuel in a state of ignition, I experience a sensation of warmth; in other words, temperature or evident heat enters my body, and affects my nerves. The question which now presents itself is, *How did the heat get there?* Not by conduction, certainly, for the atmosphere, like every other gas, is, as we have proved, a very bad conductor; neither is it by convection, for a current of cold air sets in from the door towards the chimney, up which it rushes, after having been made hot by the fire. I owe none of the heat, then, it is evident, to convection, and am reduced to the necessity of admitting that I have acquired temperature by some different means altogether, apparently analogous to the mode of the propagation of light; and which, from the analogy it presents to radii, or rays emanating from a centre, may be called with great propriety radiation.

This mode of transmission of heat seems to be altogether *sui generis*, although some have imagined conduction to be nothing more than a species of radiation from one particle to another. Its consideration involves some of the most curious phenomena presented by heat, and the application of which may be traced in many of our most common operations, where temperature is at all concerned.

In the only instance of radiation yet adduced, we have observed this mode of propagation to take place through a sheet of atmospheric air; but so far from the presence of air, or, indeed, any other gas, being necessary, we have every reason to believe that radiation would take place in what is usually called a *perfect vacuum*, which, by-the-by, is about synonymous with a *perfect nonentity*: our common ideas of a vacuum are limited to an absence of the most attenuated of all ponderable substances, *air or gas*.

It must be evident, from an examination of the conditions, in general, which regulate the distribution of temperature, that the heat which we receive from the sun arrives by the process of radiation alone, or in the same way as the light, which it accompanies, and with which it is so strangely associated, that the phenomena of one cannot be studied without involving those of the other.

In discussing the subject of radiant heat, we may introduce a certain degree of precision by treating of it under two heads—namely, *radiant heat with light*, and *radiant heat without light*; for although, in both cases, of the same temperature, yet its association with, or dissociation from, the latter agent, materially alters its properties. This fact is curiously annoying; for whilst every circumstance tends to prove how intimate must be the connexion between light and radiant heat, and every new experiment appears to advance us nearer and nearer towards the truth, yet the exact nature of the mysterious connexion has never yet been discovered.

Without immediately having recourse to any experiment, for the sake of illustrating the nature of radiant heat, let me again desire you to fancy the condition of an individual standing before a fire-place: I need not tell you that the amount of temperature absorbed would be determined by the apparel he might have on. If he were enveloped in silk, cotton, or worsted, the degree of acquired temperature would be at its maximum; if clad in polished armour, he would scarcely experience any increase of temperature at all. This circumstance you may regard as anomalous, inasmuch as a coat of mail, formed as it is of metal, must un-

questionably conduct heat much better than flannel, woollen, or silk. True; but the phenomenon in question is not one of conduction at all—being referrible to the fact that absorption, which is only the converse of radiation, differs for different bodies. The heat which is not absorbed must necessarily be reflected; and hence the relative amounts of absorption, radiation, and reflection, for the same surface, are commensurate with each other.

Radiation may be said to consist in the *going out* of temperature from the surface of a body; and absorption may be regarded as the *coming in* of temperature to the surface; consequently we may lay down the law, *that radiation and absorption are directly proportionate to each other*.

Reflection, again, may be regarded as an *inability of heat to be absorbed*; hence it is evident that the power of reflection, and of absorption, or radiation, for the same surface, are *inversely proportionate to each other*. It must be owned that this rule does not appear strictly applicable to radiant heat emanating from the sun, and intimately associated with light. In this case the power of absorption is greatly modified by colour, although it does not appear to influence radiation. If many pieces of cloth of different colour be exposed on snow to the direct sun's rays, the black piece will sink the deepest, and the white the least deep; the other pieces following the order of their colour. Here the effect of colour in modifying absorption is undoubted; but colour does not appear to influence radiation, as we shall ultimately prove.

Although we make use of the terms absorption, reflection, and radiation, yet it is evident, on examining narrowly the ideas attached to them, that they involve no *essential* difference of quality, but merely a *relative* one; being, in fact, expressions which emanate from a general notion we have formed of a certain relation to temperature possessed by the surfaces of bodies.

One of the most curious properties of radiant heat, is the correspondence of its amount with the surface, rather than the internal constitution of bodies. Suppose, for instance, I take two metallic teapots, each of equal weight and thickness, and formed of the same metal, and equally polished; into each I pour water of the same temperature, and the quantity of radiant heat diffused will be equal. If, now, I alter the surface of one tea-pot by scratching it with a file, the quantity of radiant heat given out will be much increased—a result which might be thought to depend on a decreased thickness of the metallic parietes; but such cannot possibly be the true explanation, inasmuch as a coat of lamp-black and size applied to the perfectly bright teapot renders it a still better radiator than the other. Radiation, then, depends upon the nature of a surface, or, probably, we should rather say, of the part immediately subadjacent to the immediate surface.

This property of radiant heat may be very strikingly illustrated by means of a cubical metallic canister possessing different surfaces. A vessel of this kind may be made of tin plate; one side may be left bright, another may be scratched, another covered with a coat of chalk and water, and the remaining one with lamp-black and size. Now, by means of a delicate thermometer, it may be proved that the blackened side radiates most of all; then the white one, next the scratched side, and least of all the bright one. Colour does not produce this difference, as may be seen by an inspection of the accompanying Table of Leslie's, indicating the comparative radiating powers of the substances there mentioned:—

Lampblack . . . 100	Tarnished lead . . . 45
Writing paper . . 98	Clean lead . . . 19
Crown glass . . . 90	Polished iron . . 15
Ice 85	Other bright } 12
Red lead 80	metals . . . }
Plumbago 75	

The fact that polished surfaces exert such an imperfect radiating power was long unattempted to be explained. It would appear, however, from some late experiments, probably to depend not so much on the actual polish of a body as on the increased density of particles on the surface of a body affected during the operation of polishing. If this theory be correct, the removal, by abrasion, of the hardened surface should increase the amount of radiation by exposing a less dense surface. This theory is strengthened by the following fact:—The metal silver may be cast with a surface bright and resplendent, and in this state it actually radiates more than when it is made rough by means of the pressure of glass paper, because it has been presumed that the mere act of rubbing hardens the surface of so soft a metal.

To whatever cause this connexion between state of surface and degree of radiation may be attributed, its universality is not the less certain, nor is the sphere of its application less extensive. We are taught, that whenever it is desired to economise heat, the surface of the heated body should be made bright and resplendent; when the contrary, however, it should be roughened, and coated with a mixture of lamp-black and size. Here is one instance of a beneficial application of the laws of radiant heat. It is amusing sometimes to trace the comparative course of practical knowledge and theoretical deduction—to notice how one outstrips the other in the race—then, in progress of time, is outstripped in return, until both at last proceed in an even pace towards the same honourable goal. At a very ancient period, indeed, so ancient that books do not record its beginning, gardeners entertained the notion that a very slight canopy of loose cloth or matting, when extended over tender vegetables, protected the latter from the effects of cold. Now, at this period, the laws of radiant heat were not understood; it was argued that nothing except an exclusion of cold air could effect the end desired; and as the means just alluded to were obviously incompetent to that end, philosophers, in the arrogance of their knowledge, proclaimed that the gardeners must be in the wrong; that, in short, they were actuated by mere prejudice, making an ineffectual attempt at exclusion of cold air. The time, however, came when the gardeners were pronounced to be in the right; the *rationale* of their slight and flimsy canopies was well understood, and now scientific men are the most strenuous advocates for similar preservatives.

It is to an exercise of the laws of radiant heat that we must refer the phenomenon of dew, which is not, as some supposed, a kind of small, fine rain, nor an emanation from the earth, but a deposition of invisible moisture contained in the atmosphere. Dew is never deposited in cloudy nights, which is a sufficient proof that it cannot be rain; neither does it collect equally on every kind of surface, which furnishes another answer to the same effect. Its occurrence may be thus explained: atmospheric air always contains moisture which is deposited on the earth's surface, whenever the latter becomes the colder of the two. To be consistent with the theory just advocated, clouds should prevent the temperature of the earth's surface from sinking so low as it would without their presence, which is strictly the fact, and admits of this very easy explanation. The earth's surface at night radiates away heat, which in case there are no overhanging

clouds, darts into space, and is lost; the air then, being more heated than the earth, deposits on the latter its moisture in the form of dew-drops. Supposing, however, clouds to have been present, the heat emanating from the earth's surface, not being enabled to penetrate them, is radiated back again: hence the earth does not become cooler than the atmosphere, and consequently dew is not deposited.

All the properties of radiant heat hitherto described were investigated by Leslie, and have consequently been very long known; but it remained for Forbes and Melloni to demonstrate the more beautiful and refined analogies between radiant heat and light—to prove that radiant heat, emanating from bodies of different temperatures, might be compared to lights of different colours, and to accomplish the polarization and double refraction of this mysterious and subtle agent.

These philosophers have proved that different bodies of equal transparencies differed most materially in their relative power of transmitting radiant heat; hence, as in regard to light, we have the terms *transparent* and *opaque*, or *diaphanous* and *adiaphanous*; so ought we, in regard to heat, introduce the corresponding terms of *transcalent* and *intranscalent*, or *diathermanous* and *adiathermanous*.

Of 100 rays proceeding from the flame of an Argand lamp, there are transmitted by

Rock salt	colourless	92
Cale spar	ditto	62
Smoke topaz	brown	57
Plate glass	colourless	40
White agate	ditto	35
Glass coloured . . .	violet	34
Ditto	red	33
Chromate of potash	orange	33
Borax	colourless	28
Glass coloured . . .	green	23
Ditto	yellow	22
Ditto	blue	21
Sulphuric ether . .	colourless	21
Gypsum	ditto	20
Tourmaline	green	18
Opaque glass . . .	black	16
Citric acid	colourless	15
Alcohol	ditto	15
Alum	ditto	12
Water	ditto	11

It appears that rock salt is the most transealent substance in Nature. Glass arrests more than half the heat it receives; and alum, although colourless, and water, although quite limpid, arrest more heat than the deepest-coloured glass.

This is not all: it has been found that a body may allow heat from one source to pass through it, although it interferes that from another; just as a sheet of blue glass will not transmit any light but its own: thus, between heat and light, there is such an increasing analogy, that we may be almost excused for speaking of *colours* of radiant heat; the fact is, a new idea has arisen before language has coined a word to express it.

The phenomena of double refraction and polarization of heat have been proved to be correspondent with those of light, excepting, however, that of interference, which has not yet been observed.

From the facts which you have heard stated in this lecture, it would appear highly probable that heat consists in vibrations of the same elastic medium which causes light; but if this be true, we are under the necessity of allowing that a wave of one size may very readily break up into waves of another size, because temperature may change over and over its diathermanous character, although light of one colour can never change to that of another. This is a discrepancy which would hardly, *a priori*, have

been expected, and proves that, however great the analogies between light and radiant heat, yet much patient investigation of the laws of radiant matter in general is necessary, ere the relation which exists between heat and light can be definitively settled.

ERRATUM IN LAST LECTURE.—For “conviction,” read “convection,” *passim*.

MEDICAL SECTION OF THE BRITISH ASSOCIATION,

Assembled at Manchester June 23 and following Days.

President—E. Holme, M.D. Vice-Presidents—J. L. Bardsley, M.D.; C. B. Williams, M.D. Secretaries—Dr. Sargent, and Dr. Clayton.

FIRST DAY.

THE proceedings of the Medical Section commenced at 11 o'clock on Thursday morning, the 23rd inst., and, when it is considered that there are nearly 500 medical and surgical practitioners in and about Manchester; independently of those who assemble from different parts of the empire on such an occasion, it appeared somewhat surprising that so few were to be seen at this meeting, there being never more than 25 during the first day's proceedings. When the business of the Committee had terminated,

Dr. SARGENT (of Dublin) communicated to the Section two very brief but interesting cases from Sir J. H. Dixon. The first was an enormous tumour (hydrophie), or ascites of the abdomen, represented to be (as far as the author could investigate) the largest on record. The patient (James Frazer), æt. 65, had taken from him at one time 29 imperial quarts, equal to 58lbs.

Dr. C. B. WILLIAMS (of London) observed, that when ascites preceded anasarca the liver was very generally diseased; but, on the contrary, when anasarca preceded ascites, the liver was not so often the seat of mischief. The second case was that of an aneurism of the thoracic aorta, accompanied with extensively diseased structure. On this, Dr. W. observed at considerable length on the value of stethoscopic examinations in forming a correct diagnosis in aneurisms.

Dr. SARGENT contended that aneurism might possibly exist without its signs being detected, even by the stethoscope, and that in expert hands. In illustration of this, he mentioned the case of a man applying for admission into a Dublin hospital, but in whom nothing could be detected, although he was examined by two expert auscultators: the man had walked ten miles that morning. It was at length concluded that the person had no ailment to entitle him to hospital admission. The man, however, died under the hour in the lobby of the hospital. On examination, post mortem, aneurism of the aorta was detected, and the exertion of walking had, no doubt, contributed to his sudden death.

Mr. WILSON asked Dr. Williams if he considered the stethoscope infallible in small aneurisms just forming? Dr. Williams thought in some cases, as the one just related, there might be considerable difficulty; nevertheless, he was of opinion that aneurism never existed without signs indicative of its presence.

Dr. C. B. WILLIAMS was then called upon for his paper on Auscultation and Percussion, showing the comparative value of the various kinds of instruments employed, and the manner of using them with the best advantage. It had been observed, (said Dr. Williams) by Laënnec, that the best stethoscopes appeared to be contrary to the general principles of acoustics, or, in other words, that those were not the best, which were made on strictly acoustic principles; but Dr. W. contended, that the laws of sonorous bodies

were also those of the stethoscope. The paper embraced a lengthy and able description of the many sorts used, which it is unnecessary to enter into; the following remarks, however, are worthy of particular notice. Dr. W. said, whatever form the instrument assumed, it should present a large surface to the vibrations of the column of air, which it was necessary should be an enclosed one. Dr. W. then entered at considerable length on the question as to whether the vibrations were conveyed to the ear by the solid substance, of which the instrument was composed, or the column of air in the hollow of the tube, and inclined towards the latter, but considered it imperatively requisite that it should be enclosed. He stated that Dr. Cowan (of Reading) was of opinion, that the column of air was not the conductor of the various sounds to the ear, and that if the tube was stopped with putty, or other dense matter, the properties of the instrument were not materially affected. Dr. Williams considered this view not wholly correct, and that from experiments he had instituted, he found that stopping the aural end with any dense mass depreciated its powers, but not so with the pectoral end. This species of plugging affected the flexible stethoscopes most, which led him (Dr. W.) to suppose the enclosed column of air, and not the solid medium, to be the conveyer of sounds. Sound was conveyed very correctly without the ends of the instrument being in actual contact at either end. The clothing of the patient might be allowed at the pectoral end, and the aural extremity might be kept at a moderate distance from the ear of the operator, without any disadvantage. Large holes made in the sides of the instrument did not materially injure its testing powers, which, if the solid medium was the sole conveyer of the sounds, it certainly would. Entirely solid stethoscopes were not good instruments, and this remark applied to instruments covered up solid at the pectoral end; but with this latter circumstance a singular fact was displayed, *i.e.* if the solid pectoral end be used as the aural end, it became a very correct instrument. The trumpet or bugle-mouthed stethoscope was, in his (Dr. W.'s) opinion, the best. Sometimes it was necessary to contract the opening at the pectoral end, to ascertain the effect on very limited portions of structure, and in very thin patients it was requisite to clothe the end with a coating of India rubber, for closer approximation to the parts. The author then proceeded to his remarks on percussion, entering into the variety of hammers and pleximeters. He (Dr. W.) had found, generally speaking, the deepest sounds indicative of healthy structure, and the less sonorous and indistinct ones, to be of diseased structures. In percussion, it was necessary to avoid light strokes, as they merely produced a confused sound of the superficial textures, or of the instrument itself; but a well-directed, powerful stroke emitted sounds from within. Dr. W. preferred a hammer made of lead, about the size of a shilling, but thicker, and well clothed with wash-leather and velvet: as to the pleximeter, he thought one shaped like the finger bent at a moderate angle, made of whalebone, also well clothed with the same materials, the best, as it was more easily applied between the ribs with great nicety. As a general rule, Dr. W. stated, if the operator was dissatisfied with the sound over any part, it would be well to try the exactly opposite point behind, where it would often be conclusive.

Dr. CHARLES CLAY (of Manchester) observed, that he thought a musical, or, at least, a very correct power of hearing was necessary to form good conclusions with the stethoscope. He had known a case where two expert auscultators had come to diametrically opposite opinions on the same case, experimented on at the same

time, and with the same instruments. An examination, post-mortem, proved the one to be correct; the other not. On further inquiry, he (Dr. Clay) found that the gentleman forming the correct diagnosis had an extremely correct musical ear; the other had not. Dr. Clay contended that the stethoscope in the hands of a person with an incorrect ear, partially deaf or with unmusical ears, was an absurdity, if the sounds required such nice distinctions, as it is well known they do. Dr. Clay also thought that if, when a portion of the solid material was removed from the sides of the instrument, it was allowed that the instrument was depreciated, though it might be in a trifling degree, yet it proved that the solid medium assisted in conveying the sounds, and that a destruction of some of its fibres lessened its correctness; in fact, he (Dr. Clay) thought that both the enclosed column of air, and the solid medium, assisted in conveying sounds, and that neither was to be depended upon without the other.

Dr. SARGENT (of Dublin) thought that a person might be able to appreciate stethoscopic signs without having a correct musical ear, but admitted that a good musical ear would accomplish the same with greater ease. He (Dr. Sargent) thought the plan of reversing the instrument invariably produced the cough sound, which was an objection.

Dr. WILLIAMS differed in opinion. He had experimented largely, but had not obtained it. He (Dr. Williams) thought with Dr. Clay, that a musical or correct ear was in some degree necessary, but that it might be possible, with long observation, to acquire all that was required by the stethoscope, without any very extraordinary correctness of hearing as to music, &c.; still he must allow it must be an advantage to have a correct musical ear.

Mr. TURNER (of Manchester) after long experience, thought some advantage would be gained by a convoluted stethoscope.

Dr. WILLIAMS said, to lengthen the instrument (as convolution would do), would be objectionable, inasmuch as it would produce a confusion of sound by repeated reflections. One had been used five or six feet long; the only advantage, however, he knew attending it, was that of keeping at a respectable distance from a patient with a contagious disease.

SECOND DAY.

June 24.—The attendance was more numerous to-day than yesterday, about 50 being present.

The first paper called for was that of Mr. ERICHSON, on the Influence of the Coronary Circulation on the Heart. He (Mr. E.) contended that ossification, or obstruction in the coronary circulation, was often the cause of sudden death. In illustration of which, a number of experiments were related on dogs, rabbits, &c., in which the coronary arteries were tied, and artificial respiration kept up, when it was found the heart's action rapidly declined, and ceased altogether, in a very few minutes, after the ligature. The detail of the experiments was highly interesting, and proved pretty clearly that an arrest of the coronary circulation was, perhaps, much oftener the cause of sudden death than was generally supposed.

Dr. D. HULME (of Manchester) briefly approved of the author's views, and alluded to a case or two, in proof.

Dr. C. B. WILLIAMS thought the subject an important one, and worthy of further investigation.

The PRESIDENT then called upon Mr. Shaw (of London) for his paper on the Effects of Respiration on the Circulation, and more particularly in respect to the venous department, prevailing congestion in the liver, &c. Mr. Shaw's

views were more on the mechanical principle than otherwise, and not sufficiently physiological or pathological for general acceptance.

Mr. TURNER (of Manchester) agreed with Mr. Shaw, that respiration was a powerful agent, but not the only one, by any means, in promoting circulation.

Drs. HARRISON and C. B. WILLIAMS (of London) argued at considerable length as to the nature of Dr. Reid's experiments, the former contending for their general correctness, the latter considering them inconclusive. Dr. Williams stated, in confirmation of Mr. Shaw's views, that all weak pulsations at the wrist were those during inspiration, and strong ones those of expiration; that is, where there existed an irregularity of the pulsation at the wrist, which often happened, even when the heart's action was not irregular.

A short paper was then read by the Secretary (Dr. Sargent) from Dr. Fowler, respecting a case, some particulars of which had been reported to the Medical Section when at Plymouth. It was one of deprivation of sensation of sight, hearing, and speech; the subject of which, however, possessed considerable intelligence through the medium of touch alone. Records of such cases are very limited; not so much in consequence of their being rare, as their not occupying the attention of medical men, from their utter hopelessness. One singular instance, however, had been recorded by Dr. Hibbert, of Edinburgh.

Dr. C. CLAY observed that he had seen a case some years ago, the subject of which had been now dead some time—probably the President and one of the Vice-Presidents might have heard of it, as the individual lived at Andenshaw, a small village near Manchester. He was born deaf, dumb, and blind. The sensation of taste was so very imperfect that it mattered not what was put into his mouth—he devoured it greedily, but had not sense to put any thing to his mouth himself. This blank of human existence lived to 36 years of age—was kept in an otherwise uninhabited house, and fed at certain times. On close watching, he expressed no signs of uneasiness if the meal-time happened to be delayed longer than usual, devouring food equally ravenously after short as long intervals. It was thought at one time that a slight indication of touch manifested itself in this wretched being, in consequence of his mother dying before him. Not feeling her on the pallet on which she usually lay, the noise he emitted (a sort of grunt) was louder, and it was thought he rocked himself to and fro more rapidly. He was seated in the hollow of a cradle, in which he was put (and where they were certain of finding him). Rocking himself was his sole occupation; and but seldom was he found still, or sleeping. This case was, in Dr. Clay's opinion, more wretchedly destitute than those quoted by Drs. Fowler and Sargent.

Dr. SARGENT said, the result was as he expected; there were cases, if the profession would lend their attention to the subject. The fact stated by Dr. Clay was an illustration, and a remarkable one. A gentleman inquired if Dr. Clay had an opportunity of making a *post-mortem* examination; as, in one case he had seen, there was almost an obliteration of one hemisphere of the brain? The answer was in the negative.

Mr. PEEL CATLOW (of Manchester) observed that it was a question with him, in cases such as had been brought forward, (if even it were possible to cultivate, and by that means improve the senses) whether it should be done, that is, if it would not render them more miserable by a better knowledge of their deprivations?

Dr. SARGENT thought that where it was pos-

sible it should not be neglected. In this stage of the proceedings, the President announced that Dr. C. B. Williams was necessitated to return to London that day; he, therefore, called for the communication of Dr. Williams, which was on the Therapeutic Application of Air-tight Textures to the Surface, in the Cure of Discases. What he had found most efficient was oiled silk, preventing the escape of perspiration on the one part, and protecting the surface from atmospheric influence on the other. He had found oiled silk very efficacious in removing various cutaneous diseases, and thought it worthy of attention. Another subject he wished to mention before leaving the Section was, the efficacy of air-tight bags or cushions partially inflated, for accomplishing pressure in all cases where pressure was desirable, as being most easy of application, and the pressure obtained most equal.

At the end of Dr. Williams's observations (which were illustrated by cases) the President rose to adjourn the meeting, no discussion taking place upon these practical suggestions.

THIRD DAY.

June 25.—The attendance to-day was about the same as yesterday.

Mr. PEEL CATLOW was called upon for his communication; previous to its commencement, however, Dr. J. L. Bardsley exhibited a drawing of a child born in 1837, and known to be living three years after, with four arms and four legs.

Dr. HODGKIN made some remarks on monstrosities in general, observing that the case before him had the same peculiarities as most others, and he was inclined to think such were formed by the principle of reproduction, as in the limbs &c. of the cetacei.

Mr. PEEL CATLOW then proceeded with his paper; the object of which was to prove that equal importance should be attached to the season and month of birth, in considering the value of life as a question of insurance, &c. Mr. Catlow had drawn his conclusions from a register of 10,700 deaths, compared with the period of their births from one cemetery, and about 5,000 deaths and births recorded on tombstones, in his searchings in grave-yards. It is needless to observe that the paper was a most elaborate one, illustrated with a vast number of tabular arrangements, to bear out the various views of the author. Like other statistical papers, the detail appeared tedious to the meeting, notwithstanding the conclusions arrived at were startling, and of an entirely new character in vital statistics. It would be impossible to do justice, in a brief report, to the paper; all that falls within our power is, to give a few of the many points made out. Some little allowance must be made for the author's enthusiasm as to some of his general surmises; which, after all, are far less visionary, and supported by more matters of fact, than many of the medical world at this time.

Mr. CATLOW observed, that all his Tables, and the numbers above alluded to, had reference to children under two years of age. He considered the value of life in the insurance question would be far better understood by taking in the circumstances of birth, as to time and season, assisted with the time and season of birth of the parents, which were of equal value, as the circumstances of death so generally inquired after. Passing over the rate of births and deaths in various years, which he (Mr. Catlow) fully illustrated, the Tables exhibited two and one-tenth per cent. less born in the winter quarter than the general Tables of other authors allowed; that the spring births were two and four-tenths per cent. less; the autumn

births two and seven-tenths less; and in summer, two and five-tenths *per cent. more than generally quoted*. He also found, that of spring and summer births, a great number never arrive at two years of age; but of autumn and winter births, many more, in proportion, arrived at two years of age. The above Tables were constructed from the comparison of eight years, and not from any isolated year or locality. That children born in a temperature increasing are less likely to live than those born in a declining temperature. That the season of birth predicated the season of death, and this to a much greater extent than could possibly be believed. That June and July birth, furnish the greatest quota of mortality, and that this point is contradictory to most authors. That January, on the contrary, furnished the least quota of mortality by its births. Thus the tendency to death in certain months, according to the month of birth, is as well made out as any other point of statistical information. There appears also to be a strong analogy between the time and season of birth of parents when compared with each other, and with their offspring. Mr. Catlow presumed it quite within the range of possibility to lengthen the probability of life in children by combining the favourable positions as to time and season of birth in both parents in connubial engagements; and he could not refrain from expressing his conviction, that some of the ancient astrologers had a slight idea of this matter, which assisted them materially in their predictions. One thing certain is, that, as far as figures went, they were positive facts, and countenance the views here given. Mr. Catlow mentioned many other circumstances equally novel, but which are more likely to mislead than instruct, if given without accompanying Tables.

Dr. SARGENT remarked that he felt the full value of the communication just read, and he could bear testimony to the laborious task the author had undertaken. He thought that Mr. C. deserved the thanks of the profession for his indefatigable exertions. A most valuable mass of evidence had been displayed; and, making some little allowance for that enthusiasm which was more deserving of praise than blame, he (Dr. S.) could coincide with much that had been advanced. Nevertheless, he thought an improvement might be suggested—viz., that the result would have been more *positive* had the author confined himself to children of from three to five months of age, before the mass of infantile diseases appeared.

Dr. CHARLES CLAY inquired if Mr. Catlow had extended his inquiries as to whether his views were borne out by the births of very hot countries compared with the coldest climates; for it appeared to him (Dr. Clay), that as the majority of months in the polar regions, for instance, were of declining temperature, and the reverse of this in the tropics, that the polar regions should present more instances of longevity than the tropics. Mr. Catlow had not gone beyond the cemeteries of the neighbourhood for information, with the exception of searching the obituaries of all classes, of magazines, parish registers, &c.

Dr. HODGKIN observed, that he hoped Mr. Catlow would proceed, notwithstanding the position he had assumed by his new inferences. The information was most valuable, and he (Dr. Hodgkin) hoped the profession would appreciate it, as, no doubt, much good would arise from it.

Mr. ROBERTSON was then called upon for his paper On the period of Puberty of Negro Women. In this very excellent paper Mr. Robertson showed very clearly that the commonly-received opinion of the females of hot climates menstruating so much earlier than in

our own, or colder climates, was an erroneous one, and that it was far more a matter of constitution than of age, climate, or season. Mr. R. read over some very interesting statistical information from the islands of Jamaica, &c. in support of his views, which certainly were very conclusive, as far as they went. There were, however, objections: first, the number of cases were too few for general inferences to be drawn, and the information not wholly obtained from medical sources; nevertheless, it appeared that negro females did not commonly menstruate as early as had been supposed, and that very many were quite as late as in our own climate. Lastly, Mr. Robertson endeavoured to show by British history, as well as European history generally, that very early menstruation was borne out by the early marriages recorded equally early in Europe as the majority of cases in hotter climates.

Dr. C. CLAY thought Mr. Robertson, perhaps, did not allow enough for the varieties of statement in various historians in this matter, which in many instances, were not only contradictory but quite apparent; that they often confused betrothals with the consummation of marriage whilst it was well known the consummation did not take place for many years after the betrothal. Mr. Robertson did not place much confidence in the statements of historians on medical legal points, knowing they were liable to error; he merely mentioned them as corroborative as far as they were entitled to credit. Here ended the principal business of the third day's proceedings and the Section adjourned till Monday the 27th.

PHRENOLOGICAL ASSOCIATION.

To the Editor of the 'Medical Times.'

It is not our intention to give a report of the proceedings of this institution, because our space will not allow it; but our purpose is to offer a few remarks upon the conduct of the members generally. It may be considered invidious to select any particular paper, and bring it prominently forward as deserving especial commendation, but we cannot avoid calling attention to that of Mr. Atkinson, which is one of the most important ever read to this association. The address of Dr. Engledue we unfortunately did not hear; but from the talents, the learning, the philosophic bias, and the strict mode of investigating natural phenomena, evinced by that able physician on all occasions, we are satisfied it was worthy of himself, and of the high character of the association. Of the other papers, the only one which we could find time to hear was that of Mr. Simpson, the apostle of philosophic education. For acumen, for forcible argument, for apt illustration, diversified sentiment, and comprehensive analysis, its stands unrivalled. We have had the pleasure of hearing many lecturers on phrenology, on metaphysics, on logic, the belles lettres, and other subjects of moral philosophy, but we never recollect one, who from the commencement to the conclusion of his discourse, exhibited stronger proofs of genius, of literary acquirement, and philosophic reasoning, than did Mr. Simpson on this occasion. Were all the members of the association Elliotts and Simpsons, phrenologists would not have to talk of "the public." Such men are more than ornaments to the age in which they live. They are the great landmarks to the geometry of Mind. They stand alone; and the "ebbs and flows of their single souls are tides to the rest of mankind." When the drivellers and democrats of the profession shall have passed away, shall be no more remembered than the Roman slave who preceded Galen in

his professional visits; (or, if remembered, it will be but by some accidental notice of their colics, preserved in some such journal as the *Medical Times*, as we see worthless flies embalmed in amber) they, like Gall and Jarvey, will take their stand high in the mind's eye, in the living temple of the Creator—the perceptive faculties of man—and be a light and a glory to generations yet unborn—generations whose knowledge will be, compared with ours, as ours is, compared with that of the naked anthropophagi of New Zealand. What have such men to do with the “public?”—which means Mr. Jones, Mr. Snooks, Mr. Higgins, or Mr. Figgins; or, in other words, any old woman of either sex, who pins her faith upon *this* or *that* journal. For what is public opinion? The result of the digestive ejecta of a somnolent editor, aided by a peripatetic reporter, who does the “public,” Messrs. Higgins, Figgins, Snooks, and Jones, the honour to instruct them at the liberal rate of one penny half-penny line! Alas! alas! would that they knew as much about this said public and public opinion as we do! they would treat it with the contempt which it deserves; but here, let it be remembered, we speak exclusively of the London public. And this brings us to the subject of this article. A debate, we had almost said an altercation took place immediately after the reading of Mr. Atkinson's paper, which fully convinced us, that there were several persons present, who, however they might flatter self-esteem by calling themselves Phrenologists, which in an eminent degree means Philosophers, possess no claim whatever to the title. Like the Irishman who painted over his door “dealer in foreign wines and spirits” on the credit of two water-butts and an empty quarter cask, these self-adulators think, because they have paid their fees of entrance, they are Phrenologists; that is, dispassionate investigators of truth. But how are they deceived! A want of candid examination, of patient investigation, of calm deliberate inquiry into facts, was sadly, we may write disgracefully, evinced by several members in the evening of Thursday before the last. It must be borne in mind that this class of persons are perpetually wailing and bemoaning, making light, the night of their own darkness, hideous by their rabid ululations about the “public,” the Higginses, Figginses, Joneses, and Snookses, endeavouring always to have it understood that they are martyrs to the love of science! Heaven save the mark! From what we saw of the worshippers of the opinions of Messrs. Higgins, Figgins, Snooks, Jones, and Co., on Thursday evening, we are quite convinced that roast beef and plum pudding are more to them than the science of Phrenology or the promulgation of Truth. We particularly allude to an ingenious gentleman, whose vast talent for accumulative knowledge, and whose affectionate fondness for mechanic arts, have been exhausting themselves for seven-and-twenty years in contriving a new way of riveting compasses! Full many a flower is born to blush unseen, but not Mr. Hawkins—like “a peony in June, whose blooms all red;” the new compasses describing a circle of glory round his corporal presence, which lights him and self-esteem through the devious waywardness of scientific exploration.

Henceforth let Phrenology sink into insignificance, Mesmerism be exploded, and the science of Mind remain in abeyance. Mr. Hawkins has compassed his ends, and “will have none of 'em.”

The opposition which he and others gave to the announcement of mesmeric facts—those facts too, be it recollected, stated on the authority of gentlemen in every respect superior to Mr. Hawkins in mental acquisition, equal to

him in status in society, and not deficient in those qualities which dignify human nature and characterise the philosopher—lamentable proofs of the want of which this memorable evening elicited from Mr. Hawkins—was uncalled for, highly unexpected, and reprehensible. In what other association could the astounding facts developed by the mesmeric phenomena be so fitly introduced? Mesmerism more than any other collateral proof substantiates the truth of Phrenology. It is a beautiful and a wonderful corroboration of the solid foundation upon which the structure of organology is based. It is an agent at once inexplicable and incomprehensible to the mere exoteric—the hewer of wood and the drawer of water—for the temple of Knowledge. Happy should we be could we place Mr. Hawkins and his compasses in this useful class. Strict justice, however, will not allow us to place him there, for he evinced qualifications unsuitable even to the office of janitor to the portal of Knowledge. He has no right, no claim, no title, no authority, to rise in an assembly composed of some of the most eminent men of the day, and declare “that it was easy for persons to come there with allegations without proof, and tell them of wonders which no one else had ever seen.” This was especially aimed at Dr. Elliotson, who with characteristic promptitude replied, and in an instant, the compasses and Mr. Hawkins described a retrograde movement, and shrunk, the one into its case, the other into its primitive insignificance. The conduct of Mr. Simpson, Mr. Cull, Dr. Symes, Mr. Brookes, and other gentlemen, upon this occasion, was candid and dignified, and deserving of the approbation of all philosophic men. The same applause is due to a gentleman from the country, whose name we do not remember, who at the conclusion of Mr. Simpson's lecture offered some very apposite observations, to the effect, that the association was not the public, and that there, and there only, ought the truth or falsehood of Mesmerism to be tested.

Such are the men that should be in the association. These are the minds that can associate with an Elliotson and a Simpson. These are the apostles of a new creed in human knowledge, the number and extent of whose believers will be as the sands on the shore, as the leaves in the forest, as the stars in the firmament. The Phrenological Association, if it resolutely reject the apprehension of what the Messrs. Higgins, Figgins, Jones, and Snooks, “the public,” will say, or can say, must and will rise in importance and consideration in the eyes of the wealthy and the unprejudiced, at the shrine of whom, as the holders of mammon, the somnolent editor and penny-a-liner, burn incense and bow the knee, and clothe themselves in the sackcloth and ashes of their columnar lucubrations, in which they minister hebdomadally or diurnally, to the wants, or whims, or wishes of their patrons; when we find the lovely and youthful and beautiful, the titled, and the representatives of ancient lines of ancestral stems, uniting themselves with such men as Elliotson and Simpson, and making common cause against the army of prejudice, marshalled by the Higginses, Figginses, Snookses, and Joneses of society; when we find the noble Duke of Sutherland and his amiable partner attending the prelections of the association; when such men as Earls Stanhope and Northampton, and such women as the lovely, and interesting, and talented daughter of the most celebrated poet of modern days, Lord Byron, are active gleaners in the field of Truth; when, too, an Archbishop of Canterbury takes an interest in, and testifies to the reality of Mesmerism and the importance of Phrenology, does it not seem something like quitting

a stall at the Italian Opera, to entertain oneself with the peripatetic humours of that indigenous couple, the viatic Mr. Punch and the no less vivilial Mrs. Judy, when one condescends to notice what the Higginses, Figginses, Joneses, and Snookses think or say of Mesmerism or Phrenology? The Phrenological Association has achieved a triumph, and that upon the very field of Prejudice, in the capitol of Mammon, and in the citadel of Religious Ignorance itself. We augur from the proceedings of 1842, a new era for the Mind of Man. It is nascent, and no angry Lucina, either in the shape of a pair of compasses or an old woman, can long protract the birth.

A HUMBLE INQUIRER.

RECOLLECTIONS OF PARISIAN HOSPITALS.

Being Notices of Cases in the Practice of Dupuytren, Roux, Boyer and Lisfranc.

By J. NOTTINGHAM, Esq., Surgeon, Liverpool.

Nov. 24, 1832.—After M. Piorry's lecture this evening, an important question on pathological anatomy was discussed.

Two days ago an aged female died in the Salpêtrière Hospital of fungus hæmatodes of the eye, the conjunctiva appearing to send forth the disease, which spread over the fore part of the eye, preventing the entrance of the light. The crystalline lens was found perfectly healthy and transparent.

M. Piorry made some interesting remarks on the frequent occurrence of such forms of malignant disease in many different and distant parts of the body at the same time, especially where we meet with it in those advanced in years.

In the case of this aged female, whose body was carefully examined, there were found traces of similar disease in the nasal fossæ, lungs, stomach, and uterus.

There was a fungoid polypus in one of the nasal fossæ; and the mucous membrane covering the septum was also diseased.

A tumour of a similar nature was found near the cardiac orifice of the stomach, of the size of a pigeon's egg, with an ulceration on its centre. When cut across, it was found to be highly vascular.

A similar tumour of smaller size was found attached to the interior of the womb. Fungoid tubercles were also found in both lungs.

As was remarked at the time, such facts cannot fail to show the futility of attempts to cure many such cases of malignant disease by extirpation with the knife.

The accompanying notice is short, and at first sight unimportant; but, if viewed in its practical bearings, it may, perhaps, suggest some useful hints connected with the value of a correct diagnosis in the practice, especially, of operative surgery. For want of attention to such facts, and the inferences to be derived from their assemblage, we not unfrequently see the knife resorted to in cases where a little attentive consideration would have convinced the practitioner of the uselessness of his operation, and of the propriety of being satisfied to palliate the sufferings arising from a disease which we cannot remove either by manual or medical treatment.

Reading over my short notes of M. Piorry's remarks reminds me of many unsuccessful cases of removal of the breast and testicle, which I have witnessed from time to time during the last ten years; and it appears to me that operations for malignant disease of the testicle are peculiarly unsuccessful. Without attempting anything that might be looked upon as an effort at the statistics of the subject, we may

just notice, in a cursory manner, the results of operation in a few cases.

In one case of castration for fungoid disease of the testicle, the patient, a man of 45, died within the week.

On examination after death, several masses of disease, resembling closely that of the testicle, were found in the substance of the lungs, and the glands in the loins had not escaped contamination.

In a second case of the same nature, but the patient a few years younger (36), death took place within a fortnight after the operation. Here no post-mortem examination could be obtained.

In a case of fungoid disease of the testicle, which I saw removed by Mr. Bickersteth a few years ago, a most favourable recovery took place. Here the patient was younger (30), and the fungoid testicle removed about as large as the closed fist; when divided afterwards, its section resembled somewhat the aspect of boiled turnip when sliced.

The disease of this patient was developed very rapidly after marriage; it existed before, but its size was so inconsiderable as not to attract particular attention.

We have instances on record of spontaneous cure of cancer of the breast by inflammation attacking the circumjacent cellular tissue, and by sloughing, carrying off the tumour; and a something more or less analogous I have once observed with regard to the genital organ of the male. This was a case where the disease termed fungoid attacked first the left, afterwards the right testicle, of a man aged 35; they both sloughed off, and the patient recovered. During the progress of the disease, the general health was much impaired, and the aspect of the countenance very sickly, such, indeed, as we are wont to regard as characteristic of the existence of malignant disease depending on peculiar diathesis.

In two cases under the care of Mr. Bickersteth, where operation was not thought desirable, and which I examined after death, it was very satisfactory to find how correct the views entertained of them had been, and how useless any operation would have proved.

One was a female, aged about 50, with cancer on the breast, and with that appearance of countenance which is emphatically called the malignant aspect. In this case, on post-mortem examination, extensive disease of the liver, regarded as schirrous, was met with.

The other case was a man with fungoid disease of the testicle. No operation was performed. On post-mortem examination the testicle and cord were not only diseased, but the malady extended from the lower border of the kidney to the bottom of the scrotum, on the corresponding side.

The history of certain cases of malignant disease appearing in the orbit, supplies a caution against hasty operations, and this, especially, in the young. It is with the peculiar circumstances of two or three cases of this kind present to my mind that such remarks are made.

Fungoid disease arising from the dura mater within the cavity of the skull must develop itself in some direction, and get rid, if possible, of the pressure of the cranium. It is easy to understand, that when this takes place in the neighbourhood of the anterior lobes of the brain, that the route of the orbit will be the easiest way to the exterior, especially if the orbital plate of the frontal bone be traversed, being broken up by absorption, as I saw in the case of a boy 11 years of age, who died of this distressing malady.

In one case of this disease which came under my notice some years ago a tumour was removed

from the interior of the orbit without extirpating the eyeball. The young man afterwards died, apparently from the encephalic progress of the same complaint.

Another case, in a man more advanced in life, showed a different and insidious progress of a similar growth. Here the origin of the disease was attributed to a blow on the back of the head: the patient directed the attention of the surgeon to a pulsating tumour, on the occiput, which was at first regarded as an aneurism of the occipital artery. It was found, however, by careful examination, that the disease was no other than fungoid growth from the dura mater, which had caused absorption of the neighbouring part of the skull, and which, like the substance of the cerebral mass, was raised by the impulse of the encephalic arteries, thus simulating the phenomena of aneurism. When I first saw this patient, the external tumour was small; the skull had not yet given way extensively; and the scalp was not altered, except by the slight elevation. After death the disease was found to be very extensive.

Such remarks as the above are made with a view of supplying a caution or two to the surgeon, and, as must be obvious, their practical value, if they have any, does not stand in connexion with any pathological refinement which they contain, as I should be unwilling to crowd the pages of a valuable Journal with definitions extracted from a medical dictionary, for the purpose of tracing out the contrast between malignant and benign, or the possible resemblance, in some point of view, of complaints, to which the several names of carcinomatous, cerebral fungoid, schirrous, or cancerous tumour may be applied.

It has more than once occurred to me, that malignant disease in children is more apt to attack those who suffer from bad diet, and coarse or watery food, than others. I lately saw an interesting specimen of fungus hæmatodes in a little boy of 4 years of age, arising from the temporal bone on the left side of the periosteum covering it, and involving the whole of the ear. When I first saw the tumour it was about as large as the egg of a goose, and I had some reason to think the case was one of those which favour the opinion just mentioned with regard to diet.

MEETINGS OF SOCIETIES.

ACADEMY OF MEDICINE, PARIS.

Lateral Curvature of the Spine.—M. Bouvier presented a specimen of the above disease, taken from a man 23 years of age, in whom the spinal column presented the following arrangement:—1. The principal curvature was seated in the last dorsal and the first lumbar vertebrae; its convexity directed to the right, which is very rare in lateral deviations situated at this region. 2. A second curvature existed in the middle of the dorsal region, with its convexity directed to the left. 3. Two other curvatures in inverse directions, were placed above these principal ones, and occupied the upper part of the spine. M. Bouvier in dwelling upon this case, combatted the supposed analogy between the condition of the muscles in club-foot and in lateral curvatures of the spine. He contended that this deformity is owing to the resistance of the ligaments alone in any attempt to straighten the spinal column, setting aside altogether the influence of muscular contraction in its production. He also remarked a considerable depression of the bodies of the vertebrae and inter-vertebral cartilages on the side of the concavity, a condition to which he attributed the curvature.

M. Guérin, in opposing the views of M. Bouvier, wished to direct the attention of the Academy to the evident existence of a curvature placed below that which had been considered as the principal one. It was seated in the last lumbar vertebrae and the commencement of the sacrum, its concavity directed to the right and its convexity to the left, that is to say, in a precisely opposite direction to the most apparent curvature. This sacro-lumbar curvature was equally characterised by a depression of the vertebrae and inter-vertebral substances on the side of its concavity. This he considered to be the original curvature; those placed above, notwithstanding their greater development, being merely curvatures *de-balancement*, consecutive to the first, and formed to re-establish the equilibrium disturbed by the original inclination of the column. He also remarked that the muscles of the right or convex side of the dorso-lumbar curvature were evidently shorter and more tense than those of the opposite side. Now, supposing the muscles were merely shortened in a passive manner and consecutively to the formation of the curvature, they would be most sensibly contracted on the side of its concavity. But, on the contrary, the muscular mass on the convex side is evidently the shorter. This fact, he stated, bore out his views on this question. He considered, then, this deformity to be produced by the retraction of a portion of the *sacro-lumbalis* and *longissimus dorsi* muscles, which thus commenced to curve the column to the right; that the curvatures placed above were then formed to restore the balance; thus explaining the want of tension in the muscles of the left side. He proceeded to state that he did not regard this malady as formed of a concavity and convexity, but of a series of curvatures in the spine placed one above the other and in an inverse direction. Thus, the muscles which we should, from want of attention, consider as corresponding to the concavity of the curvature, correspond in fact to its convexity. The principle then of his treatment consists, in first dividing the muscles corresponding to the concavity of the original curvature; then, if the subject is aged, he performs, as an auxiliary means, the section of the muscles corresponding to the concavity of the other curvatures placed above. This is the general principle of his operations of spinal myotomy. He concluded by stating that he would shortly present to the Academy the result of his observations on this malady, and then he should be able more fully to discuss the subject.

ROYAL MEDICO-BOTANICAL SOCIETY.
June 22.—H. Cope, Esq. Jun., in the chair.—The following extract from M. Drapiez' remarks on the *Fewillea cordifolia*, was read by the Secretary:—"M. Drapiez has ascertained, by numerous experiments, that the fruit of the *fewillea cordifolia* is a powerful antidote against vegetable poisons. This opinion has been long maintained by naturalists; but I am not aware that it was ever before verified by experiments made on purpose in any part of Europe. M. Drapiez poisoned dogs with the *rhus toxicodendron*, hemlock, and *nux vomica*. All those that were left to the effects of the poison died; but those to whom the fruit of the *fewillea cordifolia* was administered, recovered completely, after a short illness. To see whether this antidote would act in the same way, when applied externally to wounds, into which vegetable poisons had been introduced, he took two arrows which had been dipped in the juice of *manchenille*, and slightly wounded two young cats with them. To one of these he applied a poultice, composed of the fruit of the *fewillea cordifolia*, while the other was left without any application. The former suffered no other inconvenience, except from the wound which

speedily healed; while the other, in a short time, fell into convulsions and died."

It would appear, from these experiments, that the opinion entertained of the virtues of this fruit, in the countries where it is produced, is well founded. It would deserve, in consequence, to be introduced into our pharmacopœias as an important medicine; but it is necessary to know that it loses its virtues, if kept longer than two years after it has been gathered.

Dr. Cooke concluded his lecture on the strychnos nux vomica, as follows:—

Nux vomica itself may be said scarcely to be employed therapeutically. Strychnine, however, is much used. Dr. Fouquier, of La Charité, at Paris, first directed the attention of the profession to the probable powers of nux vomica in the treatment of paralysis, and especially that form called paraplegia, in which many pathologists consider the brain is never implicated. In hemiplegia, on the contrary, the brain is most frequently involved, and the preparations of nux vomica are commonly injurious. In cases of cerebral paralysis, where it is determined to try the effect of the drug, strychnine would seem to be the best form for exhibition, as it has been shown that it determines to the head much less powerfully than the extract does. Many authorities view the cases in which strychnine seems to produce cerebral symptoms as anomalous, and explicable only by reference to idiosyncrasy. For this reason, and for others connected with the acknowledged uncertainty of the effects induced by the powder, or extract of nux vomica, it would appear much better to use the active alkaloid, than the drug itself. Except in peculiar habits, the effect of strychnia may be expected, with some degree of confidence, to occur in regular sequence, the chief danger being, not so much from any abnormal direction of its powers, as from its tendency to accumulate in the system; but, as it has been before stated, it would be better to substitute brucia for strychnine. The nature of these lectures prevents any further detail of the therapeutic action of this remedy.

The table was covered with fine recent specimens of medical plants, presented by Mr. Iliff, and beautiful specimens of strychnia and its salts, including the iodate and oxalate, exhibited by Mr. Squire, of Oxford-street, Associate.

PHARMACEUTICAL NOTICES.

On the Solidification of Balsam of Copaiba. By M. Thiery.—It is to one of our young chemists, M. Mialha, that we are indebted for the first formula for the solidification of balsam of copaiba. To this preparation I have no other objection to urge than the slowness of the operation. By the substitution of hydrate of lime for magnesia, the same effect may be produced in much shorter time. Hydrate of lime has been latterly employed for the solidification of balsam of copaiba, by M. Robin, a student of pharmacy; he made a mixture of these two substances, and submitted them to the action of cold, by means of ice; the combination is slow, and requires at least fifteen days. The tediousness of this operation induced me to make some experiments with the view of discovering a more expeditious process.

The hydrate of lime, at the same time that it solidifies the balsam of copaiba, affords the means of detecting the adulteration of this liquid resin with castor oil; for, supposing four or five hours to be required for solidifying the pure balsam, twenty hours would be required, under similar circumstances, for the adulterated balsam; and even at the expiration of this time, it would retain a degree of fluidity, and an oily smell, by which its adulteration may be detected.

In the experiments I have made, I have employed three different balsams: the first was given me as pure, being in a state in which it arrived from Havre; the second was called Para balsam, having been brought from thence by a merchant—this balsam had not the ordinary smell of balsam of copaiba, approaching more to that of oil of roses, and it is therefore employed in perfumery. The third balsam was such as is met with in commerce.

The first of these balsams was solidified in four hours, the Para balsam in one hour, the balsam of commerce in five hours. The time required for the solidification is not, however, always uniform. It may be observed, that the older and more thick the balsam, the shorter the time required to render it solid. The following is the method I have pursued:—

Balsam of copaiba.....15 parts.
Hydrate of lime..... 1 part.

Mix these two substances carefully in a marble mortar, put the mixture over a water-bath, and stir it from time to time until the lime has disappeared; keep up the fire for four hours. Try now whether the balsam has assumed the pillular consistence by dropping a small portion into cold water, as in the case of turpentine.

The form of the vessel best suited for this operation is not unimportant; preference should be given to such as presents the smallest surface of the contents to the air, so that as little of the essential oil as possible may be lost by evaporation.

Two conditions are essential for the success of this operation: the first is that the hydrate of lime should be prepared at the time at which it is to be used. For this purpose take a piece of lime which has been heated to redness in the fire; when it has become nearly cold, plunge it for a moment into water, place it on a plate, and when it has become well slacked and has fallen to powder, take the quantity directed and rub it in a mortar, adding the balsam. The second condition is to operate upon the balsam in an open vessel; in a close vessel the balsam assumes a soft consistence, which no length of time will alter.

The solidified balsam loses only a twenty-fourth of its weight during the operation. This loss is due to the water contained in the lime, and to a small quantity of volatile oil, which are dissipated by the heat. The preparation preserves all the odour of the balsam, but is less nauseous in taste than the liquid balsam. The smell of the pills may be overcome by dipping them into a solution, concentrated and nearly cold, of gelatine, as pointed out by one of our brethren.

It is to be observed that these pills do not become so hard as to be brittle; they become liquid at a heat of 90 deg. Fahr., which is about the temperature of the contents of the stomach. The effect of the solidified balsam has been proved from medical experience, and its efficacy has been found to be increased by using some acid drink, such as lemonade, during the employment of the medicine, which, uniting with the lime, causes the decomposition of the resinate.

The changes which take place in this operation may be thus described; the balsam mixed with the hydrate of lime has the appearance of a white paste, but when the mixture has been heated, the lime disappears, and the mass resembles liquid resin, being transparent, but the colour rather deeper than that of the balsam employed. The acid contained in the balsam forms, with the lime, a combination which I call resinate of lime, and I should say, that the resinate exists in two states in this composition; a neutral resinate which remains in combination with the balsam, and gives to it consistence, and a basic resinate, which separates from the solidified balsam on treating the latter with spirit of ether. In fact, if the solid balsam be dissolved in cold spirit of ether, it will be observed, that as the solution is effected the solution becomes milky, and will deposit a white powder. This powder collected on a filter, washed with spirit of ether and then dried, if thrown on a red-hot coal, affords vapours which have an agreeable balsamic smell, and a portion of lime is left on the coal. If the liquid containing the solid balsam in solution be evaporated, a clear resin will be obtained, which being heated for two hours over a water-bath, will be solid and brittle; this solid mass contains only the neutral resinate. This resin decomposed by heat, the cinder which remains treated with diluted hydrochloric acid, filtered and tested with oxalate of ammonia, affords an abundant precipitate.

The basic resinate of lime which is precipitated during the solution in spirit of ether, if mixed with fresh balsam in the proportion of a sixteenth, will render this balsam solid in the same way as the hydrate of lime.

The essential oil of copaiba cannot be solidified by the hydrate of lime, which is easily accounted for by the fact of its containing no acid; nevertheless, its presence tends to promote the solidification of the balsam, and the following are the experiments upon which this assertion is founded:

I have taken—

Balsam of copaiba, deprived of
volatile oil..... 15 parts.
Hydrate of lime..... 1 part.

These two substances being mixed, were submitted to the action of heat over a water-bath. I thought the solidification would have been effected speedily in consequence of the greater density of the balsam deprived of the essential oil, yet this mixture did not acquire the proper consistence in twenty hours.

The balsam used in the last experiment being that of commerce, the process was repeated with the Para balsam deprived of volatile oil, but with the same result.

I was desirous to know what time the balsam exposed alone to the action of heat would require to be brought to the pillular consistence. I placed over a water-bath a portion of old balsam, and also of the balsam of commerce; these were each reduced to the desired consistence in twenty-eight hours, losing nearly a third of their weight. They then had the colour and transparency of good resin.

Calcined magnesia has also been employed in the proportion of one-eighth part with the balsam of copaiba. The solidification by this means is effected very slowly, requiring thirty hours for its accomplishment, and even then the consistence is not quite what could be desired. The mass always remains white; it is readily dissolved in spirit of ether, and if the filtered liquor be evaporated, the resulting resin burnt, and the cinder which remains treated with hydrochloric acid, the filtered solution tested with phosphate of ammonia affords an abundant precipitate.

In the solidified balsam, the volatile oil is not in a state of combination, for if the solid balsam be distilled with water, the essential oil is carried over. Yet the volatile oil is as necessary in the operation as is the presence of the water in the lime; both the one and the other serving some intermediate purpose. Quick lime will not solidify the balsam of copaiba.

The most speedy process for the solidification of the balsam of copaiba is the best, for a smaller loss takes place of the volatile oil, an important part of the balsam. Thus, in the formula which has been given, the mass loses only a twenty-fourth of its weight in five hours, the longest time required for the balsam of commerce.

Solidification of Turpentine.—The analogy which exists between turpentine and balsam of copaiba, suggested the idea of solidifying the former in the same manner as the balsam. After many trials I have found that, with a thirty-second part of its weight, and in the space of two hours, turpentine may be rendered of a consistence nearly brittle, having the appearance of transparent resin, and containing nearly the whole of the essential oil, thus preserving to the medicine the peculiar virtue which it possesses in many cases, and at the same time facilitating its administration.

The solidified turpentine comports itself with spirit of ether, in every respect the same as the solidified balsam of copaiba.—*Journal de Pharmacie.*

MEDICAL CHARITIES' BILL.—Lord Mountcashel on Tuesday called the attention of the House of Lords to Mr. Phelan's withholding certain letters which he had received in reference to this Bill, and publishing others; and promised to bring the whole subject before the House, on presenting, in a day or two, the Petition of the Irish Medical Association. He declared that the report of the Commissioners founded on the letters so suppressed and published, had not five lines of truth in all their contents. It appears, however, that the publishing of the report preceded the writing of the letters.

ANATOMY BILL.—Mr. Mackinnon has announced that a committee on the working of the Anatomy Bill will be moved for on July 7.

REVIEW.

The Article Stammer, from the "Penny Cyclopaedia." By RICHARD CULL, Tutor in Elocution. Printed for the Author.

WE have long intended to call the attention of our readers to the contents of this little pamphlet, which will amply repay them for the time they may expend in the perusal. Stammering is an affection of the vocal apparatus, which more or less affects nine out of every ten men we meet, but only under certain circumstances, as in cases of anger, suppressed emotion, excited sensibility, or intoxication. But there is a distinct class, and a very large class too, who are habitual stutters, and these persons are especially interested in any work which has for its object the removal of a physical disability, at once distressing to the friend, embarrassing to the listener, and painful to the speaker. Our profession, unfortunately, until very lately, paid no attention to what may be called the most numerous of the minor evils of organization: hence, the incorrigible army of dentists, chiropodists, oculists, and curers of stammering, with which this immense metropolis teems on every side. Mr. Cull, however, does not belong to this class. As a man of practical knowledge, of education, and of great experience in the cure of stammering and impediments in, and imperfections of, the vocal apparatus generally, there are few more conversant with, or better able to remove defect of tone or laxity of the muscular organs of the voice, than he is; therefore a pamphlet from him embodying the principles of cure of stammering is a valuable addition to our knowledge, and, as such, we cordially recommend it to our readers.

IODINE AND MERCURY.—The combined influence of these remedies appears, to Mr. J. W. West, to obviate the necessity of pushing mercury to an approach to salivation; and the effects are so mild, that the usual constitutional disturbance, which is produced in the system when under the influence of the latter remedy, is altogether prevented. Iodine administered by itself in some form or other, especially in that of the hydriodate of potash, has succeeded in the hands of many practitioners where mercury has signally failed. The administration of the two medicines at the same time has succeeded in cases where both iodine and mercury, given separately, have proved altogether ineffectual. The following are the formulæ he usually prescribes:—*R. Tinct. iodinae m. xx. ex cyatho aquæ ter quotidie.*—*R. Pil. hydrarg., gr. iss.; pulv. ipecac. comp., gr. iv.; conf. rosæ, q. s.; ut ft. pil. nocte manequæ sumend.*—*R. Solut. chlorid. sodæ., ʒiss.; aquæ puræ, ʒivss.; fiat gargarisma frequenter utend.*

PHTHISIS.—M. Guyon thinks that phthisis is a rare disease in the French possessions in Northern Africa. The following is the number of consumptive patients who died during the years 1838 to 1841 inclusive, at Algiers, as far as it could be ascertained:—Moors, 78 from phthisis in a general mortality of 3,177; Jews, 19 from phthisis, general mortality 702; Europeans, 137 from phthisis, general mortality 2,701.

MEETINGS FOR THE ENSUING WEEK.

- MON. 4. Botanic Gardens, Chelsea, 9 a.m.
— Entomological Society, 8 p.m.
WED. 6. Botanic Gardens, Regent's Park.
— Royal College of Surgeons, lecture, by Professor Owen, 9 p.m.
THU. 7. Zoological Society, 3 p.m.
FRI. 8. Botanic Gardens, Chelsea, 9 a.m.
SAT. 9. Mathematical Society, 8 p.m.

ADVERTISEMENTS.

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LECTURES ON THE ANATOMY AND PHYSIOLOGY OF THE NERVOUS SYSTEM.

By Professor OWEN, F.R.S., &c.

THE air-breathing articulated animals with jointed legs present greater diversity of external form and much more varied powers of locomotion than do those which respire by gills, and of which the modifications and physiological relations of the nervous system were explained in the preceding lecture. There is, nevertheless, a very close analogy in the order in which the progressive steps of complication succeed each other in both these great divisions of homogangliate animals. Thus, the lowest of the air-breathing Articulata, like the lowest of the crustaceans, resemble the worms in the great length and slenderness of their bodies, and in the sameness of size, form, and structure, which the numerous segments composing their body present. In the centipede, a series of equal and equidistant ganglia is developed upon the ventral surface of the two abdominal chords. It is at least only in the first and last of the abdominal ganglions that any modification of size can be detected. The anterior, or sub-œsophageal ganglion, for example, is larger than the rest, having to supply the modified legs which perform the function of jaws; the chords diverging as they escape on each side of the œsophagus, enclose it by uniting with the large bilobed ganglion, or brain above. The nerves from this part supply the large antennæ and the small sessile eyes. In the structure of the abdominal columns a tract less closely connected with the ganglionic nerves may be traced along their dorsal aspect. This was first pointed out by Mr. Newport, who attributes to it the motor function. A large, vascular trunk, connected also with the dorsal aspect of the nervous system, has been regarded as part of the nervous system; by some as motor; by others as a respiratory column. Its true nature is pointed out by Mr. Lord. With regard to the ganglionic and non-ganglionic portions of the true nervous axis, the same physiological reasonings will apply as lead to the conclusions already given respecting their office in the crustaceous animals.

Nothing is more clear in the anatomy than that, of the four nerves which come off from the sides of the ganglionic portions of the columns, the second, which is principally distributed to the muscles of the corresponding pair of legs, arises in a great proportion from the ganglion itself. The first and third nerves, which are smaller than the second, supply the muscles and integuments of the segment. The fourth pair of nerves passes to the breathing pore (the trachea) and to the integument. This, therefore, must be regarded as the respiratory nerve. The stomato-gastric nerve is a distinct system connected with the anterior ring or brain. In the scolopendra, therefore, one of the lowest of the air-breathing articulata, we find that, although the principle of repetition is carried to a great extent in both ganglions and nerves, yet that the

nervous system manifests all the divisions which characterise its highest division in the articulated sub-kingdom. We have, for example, the supra-œsophageal, or cephalic portion, subservient to the functions of the special organs of the senses. Perhaps, also, the centre whence voluntary impulse may be directed along the non-ganglionic tracts of the nervous axis, and to which ordinary sensation may be transferred by similarly uninterrupted nervous filaments. We have, secondly, a large sub-œsophageal mass, which, originating the nerves analogous to the fifth pair, for the masticating organs and other parts of the head, may be regarded as analogous to the medulla-oblongata. In the abdominal chords and ganglions we have the requisite machinery for the automatic reception and reflexion of stimuli, independently of sensation and the will, and to these are superadded internuntiate and uninterrupted chords, for bringing the body under the dominion of the will, and for producing harmony and consent of action throughout its extent. The special nerves to the respiratory system and the stomato-gastric nerves complete this already complicated nervous system.

In the class of insects the nervous system differs chiefly in having its primary divisions more definitely developed, and in manifesting degrees of concentration corresponding with the increase of bulk and strength in particular parts of the trunk, and in the locomotive organs appended thereto. All insects, however, commence their career, more or less, as worms; some retain their larvæ or vermiform state much longer than others; and after passing a great proportion of their lives under this form, fall into the state of the pupa, or chrysalis, relapsing, as it were, a second time into the condition of an ovum, there and then undergoing that part of their development which before was left incomplete, and finally, emerging in their perfect state to enjoy for a brief period the highest faculties, animal and organic, which they are destined to acquire—fluttering in the air, it may be, for a single day, precreating their kind, and perishing. Now the development of the nervous system, like that of the muscular, digestive, and other systems, being completed at two distinct and remote periods requires to be studied in the first and last of the active states of the insect; and also in the intermediate period, when, owing to the rapidity and extent of the change which it undergoes, the nervous system offers to the comparative anatomist and physiologist phenomena of the highest interest.

The nervous system of the larval state of the insect has been described by Lyonnet. The object which this inimitable dissector and artist selected for his patient investigation, was the caterpillar of the cossus ligniperda. The nervous axis here consists of thirteen ganglions, arranged along the medial line of caterpillars, and connected by two columns. The first and largest ganglion, situated in the head above the mouth, and of a bilobed form, Lyonnet calls the brain; the remaining twelve ganglions are situated below the alimentary canal; the eleventh and twelfth are so close together, that their distinction might readily be overlooked, but it was pointed out by Lyonnet. The sub-abdominal ganglions and inter-communicating chords were called by Lyonnet the spinal marrow. Some anatomists who have applied the analogy of the ganglionic and non-ganglionic roots of the spinal nerves in the higher vertebrata to the explanation of the ganglionic and non-ganglionic parts of the nervous axis insects, have thought that they found in the works of Lyonnet corroboration of this inconclusive physiological view. Lyonnet, however, expressly denies that the parts which he called brain and spinal marrow in the insect, were similar in anatomical structure to those in the higher animals. The spinal marrow of the caterpillar, if one may say that it possesses such, sensibly

differs from that of man. In man, observes Lyonnet, it is thick in proportion to its length, it nowhere divides into two branches, it diminishes in thickness, it recedes from the brain, and has no sensible enlargement. (Here, however, Lyonnet is in error.) In the caterpillar, he proceeds to say, it is slender, it bifurcates at intervals, and enlarges from distance to distance to form its masses, which I have named ganglions. Lyonnet, likewise, points out the difference in relative position, and in the means of protection assigned to the ganglionic columns in insects, and to the spinal chord in the higher animals. As to any views of distinct physiological properties in the ganglions or nervous ganglionic tracts, none such appear in the works of Lyonnet; nor, indeed, did they form part of the domain of physiology at that period; and it is a great advantage to us that Lyonnet looked at his subject with the eye of truth, and not through the prism of any pre-formed physiological notions. The supra-œsophageal ganglion gives off ten nerves; eight in pairs, and two solitary or azygos nerves; one of these latter is the anterior œsophageal ring, which Newport has figured and described in the *Sphinx Arbustin*. Its extremities are connected with the cephalic ganglion immediately anterior to the attachment of the principal columns which form the posterior œsophageal ring. The second solitary nerve is sent off from the middle of the posterior side of the cerebral ganglion, and proceeds backwards to the œsophageal. The cephalic nerves sent off in pairs supply the antennæ, the ocelli, the muscular, and integumentary parts of the head, and communicate with branches of the maxillary nerves. The most remarkable pair, however, is that which arises anterior to the annular or œsophageal nerve, and which constitutes the cephalic roots, or connections of the stomato-gastric system. Each of these nerves passes forwards and divides; the external tract joins one of the maxillary nerves of the sub-œsophageal ganglion. The internal one converges towards its fellow, and terminates with it in the first of the median cephalic series of ganglions, which Lyonnet terms frontal ganglions. The longest nerve in the whole body of the caterpillar, is given off from these ganglions as it passes along the œsophagus to the stomach and intestines: it has been called the recurrent nerve. There are two other small ganglions situated in the head of the caterpillar on each side of the large bilobed or cephalic ganglion. The largest nervous columns connected with the supra-œsophageal ganglion, are those which enclose the œsophagus, by uniting with the first of the abdominal ganglions. From this ganglion nerves are distributed to the mandibles, the maxillæ, the lips and their special organs of sensation or palpi. Two distinct diverging columns connect the first with the second ventral ganglion, and this is similarly connected with the third. These inter-communicating chords are called conduits of the spinal marrow by Lyonnet. The intercommunicating chords of the remaining ganglions appear single at their anterior part, and bifurcate as they are connected with the next ganglion in succession. They are of a greyish blue, but transparent colour, and are very elastic. From each side of the abdominal ganglions are given off two principal branches; the anterior to the muscles chiefly, the posterior chiefly to the integuments, but communicating with the muscular branch of the succeeding ganglion. From the beginning of the separation of the bifurcated inter-ganglionic columns, says Lyonnet, there descends a nerve, the extremity of which is enlarged a little above the succeeding ganglion, which sends off from the enlargement a transverse nerve to the right and to the left, to which he gives the name of spinal rein “*bride épinière*.” Of these there are ten pairs; they terminate chiefly in the stigmata and tracheæ, but send off small branches to the skin and to the dorsal vessel.

These are the respiratory ganglia and nerves, and have been erroneously considered as the motor column and nerves.

COURSE OF CLINICAL LECTURES ON PNEUMONIA.

Delivered at the Hospital La Charité, by Professor CHOMEL.

LECTURE XXI.

III. *Bilious Pneumonia*.—What is really meant by bilious pneumonia? Some authors have given this name to every form of pneumonia accompanied by phenomena indicative of disturbance in the biliary secretion. But such a definition is too vague to be really useful in practice; it comprehends, in fact, various states of the economy, differing one from another in their cause, in their characteristic symptoms, and in the treatment which they require. I consider, then, that to clear up this obscure point of the history of pneumonia, we should establish the following distinctions:—1st. Simple pneumonia, with jaundice, resulting from some mechanical obstacle to the course of the bile, or from some vivid emotion. 2nd. Pneumonia complicated with hepatitis. 3rd. Pneumonia complicated with icteric gastro-duodenitis. 4th. Pneumonia complicated with typhoid fever of a bilious form. 5th. Pneumonia with derangement of the biliary secretion, and of the functions of the gastro-intestinal tube—a derangement offering a peculiar character, and which differs from true inflammation of this apparatus: it is to this form that I shall specially give the name of bilious pneumonia.

A. I have already said that we must not confound with bilious pneumonia, properly so called, that form of pneumonia accompanied with jaundice arising from some mechanical obstacle to the course of the bile in the hepatic ducts, or the *ductus choledochus*, or else from some violent emotion, as fright, or a fit of anger; the jaundice, in this case, is purely *accidental*; it has no direct relation with the pneumonia, and it requires a special treatment which exercises no influence over the progress, the duration, or termination of the pulmonary affection.

B. The same may be said of the jaundice symptomatic of an acute hepatitis developed in the course of pneumonia; here, also, we have two distinct diseases bearing no direct relation one with another. We might, I think, place in the same category inflammation of the base of the right lung. This is not unfrequently accompanied by jaundice; for in fifty cases of pneumonia observed in the hospital, jaundice existed five times, and in four of these five patients the inflammation was seated in the right lung. The jaundice in this case may be attributed to propagation of the inflammation, by contiguity from the lung and pleura to the serous membrane covering the liver, and perhaps also to the most superficial layer of this viscus, in the same way as we see inflammation of the left lung extend to the heart, or even to the spleen. Still, I must observe that the inflammation of the liver, or at least of its serous membrane, is not always clearly shown; in fact, so far the reverse, that in the five patients spoken of above, the right hypochondrium was perfectly insensible to the touch; and in three cases which terminated fatally, there was no discernible lesion in the liver, or in its covering. I should, therefore, be inclined to regard the affection of the liver in these cases, as consisting usually in a more or less active state of irritation, with or without congestion, but which does not become elevated to the degree of inflammation properly so called. This irritation, doubtless, arises from the close vicinity of the inflamed lung; sometimes it appears to be purely sympathetic, as when jaundice supervenes in the course of pneumonia of the left side; we must, however, remember that the liver extends beneath the left portion of the diaphragm, and that sometimes it presents a considerable size in this situation; in some cases, also, the viscera are transposed, and the great lobe of the liver corresponds to the left hypochondrium. We must also refer to the sympathetic action of the lung upon the liver those recorded cases in which jaundice has supervened in the course of inflammation of the summit of the lung, and where the

patient presented none of the phenomena characteristic of the bilious pneumonia. A very important circumstance in these cases is, that the jaundice does not in any way modify the progress of the pneumonia, but ceases spontaneously under the influence of the means opposed to the inflammation, although we may conceive that these two affections might be attacked by different methods.

C. At other times, pneumonia is complicated with acute inflammation of the stomach and duodenum, an inflammation which is often accompanied by jaundice; in this case we find pain, heat, and tension of the epigastrium, with incessant vomitings; the tongue is often red, especially at the tip, and along the edges, while its surface is covered with a greenish yellow coat of variable thickness; emetics here only exasperate the affection; antiphlogistics and depletion form the real cure.

D. A fourth case is that where the pneumonia supervenes in the course of typhoid fever of a bilious form, which is the principal disease, and upon the issue of which emetics have but a very doubtful action.

E. Lastly, there are pneumonias in which we observe a jaundiced hue of the skin of a more or less decided character, at the same time that the perspiration, the blood, the urine, and the expectoration, contain certain elements of the bile, as shown by the green tint given to these liquids when treated by nitric acid; the tongue presents its usual form and softness; it is covered with a yellowish, or greenish coat, often of great thickness; there is a bitter taste in the mouth; the patient longs for cold and acidulous drinks; the thirst is great; there is complete loss of appetite; the vomited matters contain a considerable quantity of biliary secretion; still the epigastric and right hypochondriac regions are not the seat of any pain, and the vomitings, far from exasperating the disease, are, on the contrary, accompanied by a marked improvement; matters of an equally bilious character are voided by stool, after slight and transient pains; these various phenomena are, however, favourably modified by emetics and purgatives, which also extend their salutary action to the symptoms of the pneumonia itself, whilst simple antiphlogistics are not equally advantageous. I may add, that this form of pneumonia is more prevalent during the heat of summer than at other seasons, and that it sometimes assumes, under influences still but little known, an epidemic form. Thus, we see that *bilious pneumonia* should be carefully distinguished from *pneumonia attended with bilious symptoms*. In the latter form, the bilious phenomena are merely accidental, imprinting no special character on the pneumonia; they often require a distinct treatment, which, while modifying the functional state of the liver, has no necessary influence over the pneumonia. In bilious pneumonia, on the contrary, the inflammation of the lung and the bilious state form but one complaint, requiring the same treatment. To show the great importance of this distinction in a therapeutical point of view, it will suffice to say, that if we confound, for instance, a bilious pneumonia with pneumonia complicated with icteric gastro-duodenitis, we should not dare to have recourse to emetics, purgatives, or full doses of tartarised antimony; antiphlogistics alone would appear to be indicated; and this latter treatment, so useful in cases of gastro-duodenitis complicated with pneumonia, would most probably fail in the cure of true bilious pneumonia; while, on the other hand, by mistaking pneumonia complicated with hepatitis for a bilious pneumonia, we might have recourse to emetics, which would have the double inconvenience of exasperating the hepatitis, and causing us to neglect the employment of antiphlogistics.

Authors are not agreed as to the exact influence of the bile in the production of that state of the economy constituting bilious pneumonia. Some, while admitting that the bilious phenomena should cause some modification in the treatment of the pneumonia, still consider them merely as super-added symptoms, forming a simple complication which leaves to the pneumonia its inflammatory character, and requiring a purely antiphlogistic treatment. Others, with whom I am inclined to

range myself, give to the bile a much more important character, some authors even making the pneumonia to depend directly upon this liquid. The biliary secretion, under the influence of certain atmospheric conditions, experiences remarkable modifications; the bile, augmented in quantity, or vitiated in quality, acts as a deleterious or irritating substance in the economy, and nature tends to relieve herself by bilious vomitings or purgings; at other times all the symptoms of bilious fever show themselves; sometimes it is simple, but not unfrequently complicated with inflammation of the stomach, the liver, or the lung, &c. In all these cases, the true exciting cause of the disease is the abnormal secretion of the bile, and the various symptoms, whether febrile, bilious, pneumonic, gastric, or hepatic, indicate merely the various degrees of intensity of the cause, and the susceptibility of this or that part of the organism in which reaction is produced. Hence it follows, that any treatment which is not directed to the cause of the malady will be inefficient, frequently even injurious. In the same way as ophthalmia determined by the presence of a foreign body, although it might become ameliorated under the influence of abstraction of blood, could never be entirely overcome till the removal of the irritating body which had caused and maintained it, so bilious pneumonia might amend, or even appear to yield, under the employment of antiphlogistics; but, unless we eradicate, by emetics and purgatives, the irritating substance, which is the principal cause of the disease, we shall quickly see the symptoms exasperated, and the life of the patient compromised. (*Sublatâ causâ tollitur effectus.*) Nature itself frequently points out to us the course which we ought to pursue, since, in this kind of affection, we see abundant bilious evacuations spontaneously induced, quickly followed by amendment, or even by a perfect cure. These humoral theories have doubtless led practitioners into grave errors; but it would be imprudent entirely to reject them. In fact, from the earliest times down to the present day, we find men of the greatest celebrity admitting that certain pneumonias, after resisting abstraction of blood, have yielded with facility to the employment of evacuations. Thus Hippocrates has frequently spoken, in his writings, of pneumonias in which emetics and purgatives were the only efficacious remedies, and which seemed to be aggravated by blood-letting. Galen and Avicenna acknowledge the same fact. Baillon, speaking of those physicians who treated pneumonia on antiphlogistic principles only, expresses himself as follows:—“*These rash men forget that pleuro-pneumonia arises from various causes, and that if sometimes blood-letting is required, at other times this treatment is barbarous, or even murderous.*” And in the same book, he speaks of pneumonias caused by some gastric affection, and which become cured by an attack of cholera, or by free purgation. Sydenham himself, who allowed so much power to antiphlogistics, acknowledged the existence of pneumonias which resisted this treatment, but yielded to the influence of a prevailing bilious epidemic. Baglivi, Ramazzini, Huxham, and Zimmermann have also admitted the same fact. In the commencement of the eighteenth century, Guidetti published a remarkable dissertation on this subject. The patients, he says, who were almost always strong in constitution, usually perished towards the fifth day, when treated by blood-letting; those survived who were subjected to the employment of evacuations. Fineke, Stoll, Laënnec, and others, speak to the same effect. The bilious state in pneumonia is sometimes very apparent, and may be easily recognised when all the previously mentioned symptoms are present; at other times these phenomena partly disappear; the jaundice declines; the fur on the tongue loses its yellow or greenish colour; the vomitings and bilious stools cease, and the urine is no longer of a deep yellow tint; but on treating this liquid, or the serum of the blood with nitric acid, a green colour is produced, thus proving the presence of bile. M. Martin-Solon has employed this agent in several instances with great success. In one case, the patient entered the hospital on the eighth day of an attack of double pleuro-pneumonia, after having been twice bled; further abstraction of blood was

practised, but the bronchial souffle became more intense. The bitter taste in the mouth, and the green precipitate formed in the serum and in the urine, discovered the presence of the bilious state; castor oil was prescribed; *the green matter disappeared from the blood and urine, after free bilious evacuations*, and the pneumonia assumed a more favourable course; the urine afterwards became precipitable, thus announcing the solution of the disease. There are, however, cases where the pneumonia presents itself with the appearance of bilious symptoms, the yellow fur of the tongue, nausea, &c.; but the serum of the blood and the urine not presenting the colouring matter of the bile on the addition of nitric acid, show that the pneumonia is not of a really bilious character.

IV. *Metastatic Pneumonia, or Pneumonia caused by the reabsorption of purulent matter.*—Having previously spoken of the cause of this pneumonia, I shall not here recur to this subject, but shall merely mention that it appears to be owing to the absorption of pus into the circulatory system, and to its deposition into the pulmonary parenchyma. In an immense majority of cases, metastatic abscesses of the lung remain entirely latent, and their existence is only suspected by an examination into the previous history of the disease, as well as the general state of the patient. Percussion furnishes no positive guide; on auscultation, we discover either a slight mucous, or a sibilant râle, rarely crepitation; this lesion is so rapidly developed as to allow our discovering only the bronchial souffle, and even this is generally feeble, since the patient does not fully expand his chest during inspiration. But, as in true pneumonia, on the decline of these symptoms the *rhonchus crepitans redux* is heard during inspiration and expiration, the cough ceases to be dry and scarce, the expectoration becomes purulent, and the cure takes place more rapidly than one would expect; this is perhaps owing to the trifling alteration which the parenchyma has undergone. In general the cough is rare, the expectoration almost, or entirely absent, pain is seldom present, or merely exists in a few points, but respiration is generally difficult. The general symptoms are those of purulent fever, but are not essentially characteristic of pulmonary abscess.

The pneumonia of lying-in women presents itself under several forms. Sometimes it offers the characters of ordinary lobular pneumonia; at other times it assumes the typhoid, and frequently the metastatic, or purulent forms. In these cases it usually constitutes but a part of a diseased condition, most frequently beyond the resources of art; its progress is in general remarkable for its frightful rapidity.

MONSTROUS FORMATION.

By F. FAESEBECK, of Brunswick.

(For the 'Medical Times'.)

THE wife of a labourer, named Bätge, of Königs-lutter, in Brunswick, æt. 38 years, strong and healthy, of gentle and quiet temper, was impregnated in the year 1838, for the third time, by her equally robust and healthy husband. Her gestation proceeded with great regularity, without any complaint whatsoever, except a little mental excitement, of which the too irritable temper of her husband was the cause.

After a somewhat difficult labour she was delivered of a strong and perfectly well formed child, joined, however, by a stem springing from the upper part of the abdomen, to a parasitical trunk, entirely devoid of the upper part of the body. I have not been able to determine how the placenta and umbilical chord were formed, the midwife, however, states that the latter was very thick, and almost twice as strong as in its normal condition. Both child and parasite were of the male sex: the latter, however, was so far imperfectly developed, that the lower part of the right thigh was deficient. The upper parts of both thighs lay close to the boy's abdomen.

The healthy child, capable of all the functions of life, carried his half-brother before him, close to the navel—a little, however, above, and to the left, in such a manner that the parasite might be turned

upward or downward at pleasure. The back part of the parasite's trunk was convex, and consisted almost entirely of soft materials, the vertebrae being entirely wanting. The lower part of its trunk was pretty well developed; the pelvis seemed, at first sight, to possess all its essential parts, the vertebrae excepted; that those, together with the sacrum were absent, might have been inferred from the fact, that both ossa ilii together formed a vaulted arch, a mere cul-de-sac, indicating the place of the rectum.

The parasite's sexual organs were naturally placed, and tolerably well developed: the length of the penis was an inch and a half, and a probe might be introduced through the urethra to the depth of two inches. The scrotum was quite empty, and the joints of the lower limbs quite immovable. It might have been inferred that the entrails of the parasite were in no connexion whatever with those of the child, from the fact, that when the latter cried, there was not the slightest swelling visible, either in the parasitical trunk or the connecting stem.

Both the child and parasite had a discharge of urine, but at different times quite independent of each other. On turning the parasite upwards or downwards the child never gave the least sign of pain or emotion, not even when the parasitical trunk was pricked or scratched: a fact which proved, that between the two trunks there existed no nervous communication. The parasitical extremities were all immovable, except, perhaps, the great toe, which *did* appear sometimes to move slightly.

The temperature of the parasite was rather less than that of his companion: both trunks perspired, but the perspiration of the appended trunk was slightly the colder of the two.

From a consideration of the preceding facts, it appears that between the intestinal tubes and the nerves, respectively of both brothers, there existed no communication. It would appear, moreover, that the arteries which gave strength to the parasite, came from the mature child; and the veins of the former returned to him by means of the stem.

The question now naturally arose, whether or not a separation from the parasite was warrantable, or, indeed, possible, without endangering the child's life? His being allowed to remain attached might have produced several bad consequences. It might have occasioned, by its weight, oppression on the child's body, and thus have prevented digestion; its continual weight might have weakened the abdominal muscles beyond the power of contraction; and, moreover, it was anticipated that the boy, when arrived at an age mature enough to reason, might have upbraided his parents for negligence in omitting to have him delivered of his burthen in time. The objections to the operation were the possibility of its bringing on inflammation of the bowels or peritoneum. It was also to be feared that the tying of the stem might produce violent nervous irritation, which might lead to *trismus* and *tetanus*. After duly weighing the advantages in favour of, and against an operation,—I imagined the former prevailed, and together with the other physicians, decided on its performance, although doubtful as to the result. Insurmountable difficulties, however, arose to prevent its execution, from the child's parents declaring they would not give their consent. It might have been performed in three different ways:—1. By placing a ligature all round the stem, to be pulled tighter by degrees, so that in case of trismus or tetanus coming on it might have been loosened again. 2. Should the ligature not have sufficed, one might have severed the stem by a few cuts, tied the vessels together, and treated the wound like a mere sore. 3. If, during the foregoing bloody operation, any intestines had been found in the stem, one might have treated the case like enterocoele.

The child died of spasms in the fifteenth week. Information of its death was immediately given to the director of anatomy and surgery, who commissioned me to go to Königs-lutter, and beg the monster for the institution. After having executed this commission, I proceeded to the post-mortem examination.

The section of the child presented nothing extra-

ordinary, but that of the parasite the following anomalies:—

Bones.—The separation between ilium ischium and pubis was very well defined, these three bones being quite natural, except the ossa ilii, which, instead of being joined to the side of the sacrum, were united with each other, forming together an arched border. The pelvis had an oval opening superiorly.

The upper portions of both thighs were present though the right one was a little shorter and weaker than the left; they were quite normal.

The capsular ligaments of the hip-joints were moveable in their sockets, but this mobility was owing to the capsules being cut; they were too tense to admit of motion before this.

On the left side there existed a normal tibia and fibula; on the right side, however, there was but one piece of bone, about an inch long, resembling the tibia. I found no trace of patullæ on either limb. The bones of the tarsus were naturally formed, but here and there were composed of a gelatinous substance. There were no ligaments to be found, except the capsular ones surrounding the joints.

Instead of muscles, I found a firm white fatty substance, in which they were only marked by an aponeurotic expansion.

The Arteries.—The arteria mammaria interna sinistra of the child was as thick as a quill, and pursued a tortuous course. Below the processus ensiformis, where this artery came into sight, it proceeded through the left part of the stem into the pelvis of the parasite, and divided into—1, *a left branch*, as the *arteria cruralis sinistra*, which, together with the vena cruralis and nervous cruralis, proceeded on the inner part of the femur: 2, *a branch to the right side*, which winding between the kidneys and fundus of the bladder, behind the urethra, proceeded to the right limb, as *arteria cruralis dextra*. On its way it gave off the following arteries: (a) two branches to the kidneys, three or four branches into the pelvis, and the arteria umbilicalis, which gave off on its way a branch as *arteria spermatica interna*, accompanying the vas deferens, and could be traced into the testicle. The continuation of arteria umbilicalis returned backwards through the stem to the annulus umbilicalis of the child.

The veins commenced at the end of the parasite's extremities, and entered the pelvis, where the vena cruralis dextra had the longest course to pursue. In its way it received two vena umbilicales, one vena renalis, one vena spermatica interna, and some venæ hypogastricae; it stood also in connexion with the vena cruralis sinistra on the left side of the pelvis.

Both venæ crurales formed a common trunk, which continued on the right side of the arteria mammaria interna to the processus ensiformis of the child, and then divided behind the latter into two venæ mammaria internæ, where it assumed considerable thickness, and ran into the venæ subclaviæ. The lymphatic vessels, and vena postarum, it seemed to me, existed in the parasite. All these trunks ran through the stem close together, above and to the right of the umbilical vessels, into the liver of the child.

At the commencement of the monster's examination, my attention was principally directed to its nervous construction, in order to deduce from them physiological results. It would afford me the greatest delight, if my readers were to think that I have not completely answered my aim.

Between the bladder, kidneys, and urethra, were situated two ganglia, which by means of branches communicated with each other; from them sprung several little twigs which proceeded alongside of the vessels, and formed a small knot at the bifurcation of the arteria mammaria; this received another twig from the left nervous cruralis.

Proceeding from the front part of each ganglion respectively, was a nervous cruralis, of which the left was by far the largest; both those twigs proceeded to the femora.

The ganglia within the pelvis on the left side, were connected with each other by branches forming a plexus, and also with the left nervous cruralis sinistra.

From this plexus sprung the following nerves, (a) nervus ischiadicus sinister (b), nervus ischiadicus dexter. Both nerves went through the pelvis, and divided to each thigh. The left one at the bend of the knee subdivided into three branches; (a) nervus tibialis (b), nervus cutaneus posterior cruris. These nerves, without forming any communications among themselves, divided quite regularly at the foot; (c) lastly, came another nervus cutaneus posterior, which went through the pelvis, and could be traced as far as the skin, where it subdivided.

The foregoing ganglion, which I take to be a development of the nervus sympathicus, from which all these spring forth, stand in compensation for the absent spinal marrow, from which, under ordinary circumstances, they ought to have derived their origin. The external lamella of the infant's peritoneum extended through the stem of the parasitical trunk, and formed two sacs, which were connected by an opening with each other.

Within these two cavities was a knot of intestine 18 inches long (*German*), and of equal breadth. Neither stomach nor rectum was to be found. The upper part of this intestine terminated in a cul-de-sac, and was connected with the knot already mentioned. The lower part opened into the fundus of the bladder, where also were the ureter and vas deferens; the opening was not larger than a pin's head. This contraction accounts for the muddy condition of the urine, as the slime was necessarily mixed with it.

The urinary organs of the parasite consisted of one kidney; it was situated in the cavity of the ilium, was tolerably large, and divided into four lobules. From the middle where these were joined, sprung one ureter as thick as a quill, this opened into the fundus of the bladder.

The latter organ was somewhat elongated, and visibly divided by a contraction into a larger and smaller portion; the urethra was quite normal. The sexual construction has already been noticed; on nearer examination, I only found one testicle; i.e. the right one, which was found in the pelvis: it derived its nourishment from the arteria spermatica interna, which sprung from the arteria umbilicalis. The vena spermatica interna which, in its tortuous course, ran to the vena cruralis dextra, terminated quite normally.—*Translated from Muller's Archives.*

SUCCESSFUL EMPLOYMENT OF SUPER-ACETATE OF LEAD, IN OBSTINATE DIARRHŒA, SUCCEEDING TO DYSENTERY.

(For the 'Medical Times.')

MR. T—H—, æt. 44, farmer, of intemperate habits, had been exposed to cold, wet, and fatigue, during the variable weather of last autumn. At first, the symptoms were those of an ordinary diarrhœa, which by inattention and improper treatment, assumed by account all the symptoms of acute dysentery. The first attack was on the 10th October, but medical aid was not asked till the 23d day of the same month, when he was first seen by a medical practitioner. By the use of Epsom salts, and pretty full doses of opium, the stools, from being mucous and bloody, assumed, at the end of three days, a more natural, but somewhat bilious appearance. Gradually, the symptoms were those of intense diarrhœa serosa, and notwithstanding the liberal use of opiates, alone, and combined with calomel, mixt. Cret., alum, kino, &c., continued with unabated violence till the 5th November, when I first saw him.

At this period, the patient, from being plump and full, was much emaciated. Pulse about 100, and soft; skin, rather dry; little heat of surface; tongue clean, and slightly red; urine high coloured, and lateritious, but did not, on being heated, show any coagulum. No pain in the abdomen on pressure. The stools, which were watery, without fætor, with an occasional admixture of feculent matter, numbered from

18 to 24, or more, in 24 hours. There was generally an exacerbation in the evenings, but more particularly very early in the mornings. Considerable thirst.

R. Opii gr. iss.
Superacet. Plumb. gr. ij.
Ft. pil. 6tis horis sumenda.
R. Ung. Hyd.
Ol. Terebinth.
Aq. Ammon. aa. ʒi.
Axung. Porc. ʒi. Ft.

Liniment:—one drachm by weight, to be rubbed on the abdomen morning and evening; a double flannel roller to the body. Chicken broth, or beef tea to be freely taken, with farinaceous food.

7th. Four pills taken with scarcely any effect upon the number of stools.

R. Opii gr. ij.
Superacet. Plumb., gr. iij.
Ft. pil. 6tis horis sumenda.

8th. Stools somewhat diminished. Castor oil ordered to be taken on the following morning, which, I learn, had the effect of distressing the patient much.

From this period to the 15th, the pills as above were regularly taken, and one occasionally omitted after the stools had become less frequent. Castor oil in 2 drachm doses occasionally. By the 20th the stools were nearly natural, and the pills were discontinued, with directions to take one at bed-time if the diarrhœa threatened.

22nd. Two stools in twenty-four hours; solid animal food and an allowance of mild porter. It is right to add, that wine had been tried on or about the 12th, but with decidedly bad effects.

In the *Study of Medicine*, by Dr. Mason Good, Vol. 1, under the head "Serous Looseness," it is said:—"It is probable that in some cases of this kind the superacetate of lead in doses of a grain, combined with three or four drops of laudanum, might prove equally useful." And in *Thompson's London Dispensatory*, edition of 1836:—"The dose of acetate of lead, when internally exhibited, should not exceed gr. ss, given every six or eight hours." In the excellent *Outlines of Midwifery*, by Dr. Conquest, two-grain doses, with ¼ gr. of opium, are directed to be given every hour, in uterine hæmorrhage, till six pills are taken. The author adds:—"Lead is a much more valuable, efficient, safe, and manageable medicine than is generally supposed."

In Mr. Hooper's account of the sick landed from Corunna, in the fifth vol. of the *Edinburgh Medical and Surgical Journal*, an account is given of the acetate of lead being used in dysentery, but without beneficial effects; and one concluding observation is deserving of notice, in regard to the continued use of the lead: "it appeared to have no effect on the constitution."

Since the above case was drawn up, some months ago, Dr. Christison's *Dispensatory* has appeared, with remarks tending strongly to recommend to the notice of medical men the more extended use of the super-acetate of lead, in obstinate diarrhœa, as well as internal hæmorrhage. And from a communication with which I was honoured from that gentleman, shortly after the above case occurred, it appeared that the remedy had been, for some time past, freely used in Edinburgh. In the above case, it is not undeserving of inquiry, would a still more liberal use of the lead, with less of opium, have shortened the duration of the disease? Such of my readers as may have witnessed the obstinate dysenteries and diarrhœas of the Peninsular campaign, will bear me out in the remark, that many cases occurred,

and were continued for months, where a judicious use of the remedy now brought under notice could not have failed to have had the best effects.

Kinross, June 23, 1842. ROBERT ANNAN, Surgeon.

EXTRACTS FROM FOREIGN JOURNALS. (For the 'Medical Times.')

ACADEMY OF SCIENCES.

THE President announced to the Academy the death of M. Double, member of the Section of Medicine and Surgery, who died on the 12th of June, at 11 p.m., of an attack of pulmonary apoplexy.

Poisoning by Antimony.—Mons. Flandin read a memoir on poisoning by Antimony, and on the complications which may be induced by this substance in cases of poisoning by arsenic. The following are the conclusions at which he arrives:—1st. It is easy to discover antimony when combined in merely small proportions with animal matters; that, in fact, we may discover it with the same precision as arsenic. 2nd. The following is the process which he has found best adapted for this object; the animal matters are to be acted upon by sulphuric acid, when in a state of liquefaction, some nitrate of soda is to be added; on completing the carbonization, the dried residue is to be redissolved in a solution of tartaric acid. The liquid is then to be subjected to further investigations with a view of discovering the antimony. 3rd. In cases of poisoning by arsenic complicated with the presence of antimony, the apparatus proposed for the discovery of arsenic appears to simplify and facilitate the necessary operations for separating these two bodies. 4th. Contrary to arsenic, antimony is easily eliminated by the urine. In cases of poisoning by antimonial preparations, we find this substance most especially in the liver; no traces of it can be discovered in the lungs, the nervous, the muscular, or the osseous systems. 5. The fact of the localisation of poisons furnishes valuable information in resolving certain medico-legal questions; for instance, questions of simulated poisoning. 6th. This fact appears to open a new path to physiological and therapeutical researches.

Properties of the Ergot of Rye.—Mons. Boujean, of Chambery, addressed a memoir entitled "The Toxicological and Medical History of Ergot of Rye." M. Boujean ranges this substance in the class of narcotics, and states that its effects have the greatest resemblance to those of morphine, although it does not contain a trace of that alkaloid. The most interesting result of his researches is the following:—The ergot, he says, contains two perfectly distinct active principles; the one a remedy, and the other a poison. The first is a soft, reddish-brown extract, very soluble in cold water, and which possesses in the highest degree the valuable obstetric and hæmostatic properties so long since accredited to ergot. The second is a fixed oil, colourless, very soluble in cold ether, insoluble in boiling alcohol, and in which alone all the poisonous properties of the ergot reside. The different nature of these two products easily allows of our separating them, and thus obtaining the remedy perfectly isolated from the poison; the preparation thus obtained being altogether inoffensive, this great advantage results in medical practice, that we may, in cases of necessity, administer it in large doses, without any fear of those accidents attributed to the ergot itself. This extract acts with extreme rapidity in all hæmorrhages, and without producing the least injurious action, whatever may be the quantity employed. In some cases, as much as two drachms of the extract (equal to eight or ten of the ergot) have been given in

alarming uterine hæmorrhage, after miscarriages, &c., and which yielded immediately, or nearly so, to the action of this remedy. M. Boujeau calls this preparation the hæmostatic extract. The ergotized oil acts upon animals exactly like the ergot itself, and in similar doses, only its effects are more speedy. They are immediate in weak animals, as birds or chickens, which are easily narcotized with a drachm of the oil, being equivalent to rather less than three drachms of the powdered ergot. These animals died in about twenty-four hours, without awaking from the stupor into which the poison had plunged them. In the dose of four to five drachms, the oil produced in a dog all the phenomena of convulsive ergotism. To obtain this oil in perfect purity, it is necessary to extract it by cold ether, and to avoid in this operation all action of heat. Lastly, this principle may be entirely inert, if derived from ergot which has not reached its full maturity. The usual form for administering the extract, is by dissolving it in water and adding a proportion of syrup. It should, however, be merely prepared as required, on account of its great proneness to fermentation.

The following extraordinary case of nervous susceptibility, is related by M. Trousseau. The great singularity of the case has induced us to lay it before our readers.

In the month of December, 1840, M. Trousseau was consulted by a female, 40 years of age, holding a respectable situation in a mercantile house, where she displayed great activity and intelligence. This person, if subjected to any rather pungent odour, whether in a room or in the open air, was immediately affected with an alarming feeling of suffocation, constriction of the throat, convulsive twitching of all the respiratory muscles, and congestion of the face. These phenomena lasted for half-a-minute or a minute, and were produced by the fume of a cigar, or by any scent or perfume, but not by the more fetid odours which one is sometimes obliged to encounter. The sensations conveyed through the hearing, the sight, or the taste, produced no inconvenience; but those induced by the touch were attended with extraordinary, and even incredible effects. On touching the naked skin or even the clothing, she immediately experienced a sensation similar to an electric shock, which was directly followed by an attack of spasm and suffocation. On touching the hand, the face, and part of the neck, she experienced no abnormal feeling; so that the neck might be said to be encompassed by a line at a certain point, above which the sensibility was of a normal condition, whilst below, it was morbid. This line, which was almost geometrical, was indicated by no sign. When this lady touched herself or struck against some inert body, she experienced nothing beyond a common sensation. These morbid phenomena developed themselves only when touched by another with the hand either bare or covered; but they were not produced when the contact took place through the medium of some body of a certain length. The most singular character in this anomalous sensibility, if in reality it was such, is, that immediately she laid herself down, whether by night or day, this peculiar condition ceased. These morbid phenomena continued for several years. M. Trousseau ordered sea-baths, cold affusions, and antispasmodics, although anticipating the failure of all remedies. He has since, in similar cases, met with considerable success from the employment of amber.

M. Ruef of Strasbourg, states that from an experience of several years, he has ascertained that phthisis is rare among the workmen who are employed from their youth in the manufacture of tobacco; and further, that this disease

makes much less rapid progress than in the ordinary state in those who enter these works with a germ already developed.

Therapeutic effects of caloric applied to the skin.—M. Gondret states that the flame of a burning match being instantaneously applied to the skin produces a sharp pain, which disappears as rapidly as it has been produced. This flame forms upon the skin a small reddish mark, which, after a few days, leaves no traces behind it. The instantaneous application of this flame almost always speedily dissipates a rheumatic, gouty, or any other kind of pain. He has also found this result in most kinds of chronic pains; and he further thinks that it might be advantageously employed in asphyxia, while waiting till more appropriate remedies could be adopted, he has in several instances more or less completely dissipated the pains and convulsive contractions of the *aura epileptica*, and prevented or considerably retarded the invasion of the epileptic fit by this means. The physiological effects of this agent have, he thinks, a great resemblance to those produced by electricity. On asphyxiating a rabbit by repeated shocks applied to the occiput, the flame of a match passed along the vertebral column quickly restored the animal to its natural condition. This result is exactly similar to that which he had obtained, under similar circumstances, by galvanism as well as by cupping.

PHRENOLOGICAL ASSOCIATION.

FIRST SITTING—(CONTINUED.)

AFTER thanks had been returned to Dr. Engledue by a large majority, notwithstanding some opposition from two Swedenborgians, who were all for spirit, Sergeant Adams, who declared he had not virtue enough in him to do right without supernatural interposition, Dr. Moore, who was all against Mesmerism, and a Barrister named Churchill, who was all for capital punishments, the following case was read by Mr. James Simpson, the Advocate, of Edinburgh, well known for his exertions in the cause of Education:—

Case of Homicidal Insanity occurring in Peter Rivière.

This unhappy young man brought himself into a miserable notoriety in June 1835, by murdering his mother, æt. 40, sister 15, and brother 8, one after the other, with the same weapon, a hedge-knife, in a fit of maniacal excitement. I have seen a minutely detailed account of this deplorable event translated from the minutes of the Criminal Court of Caen, in Normandy, embracing the depositions of the witnesses on the trial; a memoir, by Rivière himself, of his life, and of the working of the various hallucinations which led ultimately to the horrible tragedy which he performed, with the medical report of his case, bearing the signatures of several of the first names in the profession in France.

From these several sources, the whole faithfully translated by a medical friend, we are enabled to give the following greatly abridged but sufficiently comprehensive statement of this instructive but horrible occurrence.

Peter Rivière, æt. 20, was the son of a small farmer in the district of Armay, in Normandy.* His eccentricity of character was the occasion of great affliction to his family, and considerable annoyance to the village and neighbourhood in which he lived. He was obstinate, taciturn, and solitary, shunning even the society of his own family. He was without filial affection to either parent, and against his mother entertained a fixed and deep-rooted

hatred; he shrunk from contact with her with a phrenzied abhorrence. He was always uneasy in the presence of any female, so much so as to be considered a woman-hater. (This arose from one of his most singular hallucinations—that an influence emanated from him which would render any female that came near him a mother without her consciousness, of which result he often expressed the utmost moral horror, especially when the female was so related to him as to involve incest.) He was from his infancy cruel; as a child he crushed birds between two stones, and to the last carried a hammer and nails in his pocket, to nail frogs and other animals to trees, which he called crucifixion. He often spoke of the passion of Christ. He pursued children with weapons, threatening them with death; took much delight in frightening them in various ways, such as holding them over a deep well, and making them believe that he would let them fall in. He rambled and roamed about, often sleeping in old quarries, and subsisting in the woods for days upon wild fruits. On his return from these excursions he avowed that he had seen the devil, and made a paction with him. He talked when alone, made odd noises, and laughed like an imbecile; yet was often apparently proudly exalted, and boasted of his importance and extraordinary destiny. He read heroic books, and identified himself with the heroes described, often going to war with the cabbages in the garden, which he mowed down with a stick as so many legions of enemies. He remembered all he read. He studied philosophical works; and as some of them were of an infidel tendency, he became irreligious. He next suddenly changed to extravagant devotion and piety, and the catechism of Montpelier, lent him by the curate of Armay, became his study night and day. In this frame of mind he took the Sacrament. On the day he perpetrated the triple homicide he dressed himself in his Sunday clothes; and when asked by his grandmother what freak he had *now* in view, answered, "You will know ere night." He complained that morning of great uneasiness at the heart. He came unawares upon his victims, and cut their throats. He then came out of the house, and, showing his bloody hands, boasted of the deed, saying, "I have delivered my father; now he will be no more unhappy." He left home, carrying the knife with him dropping blood, and wandered in the woods and over the country for a whole month before he delivered himself up, as he ultimately did, to the civil authorities. The witnesses all considered him as an imbecile or madman. He was of small stature, his forehead low and narrow, his black eyebrows formed an arch, his head inclined downwards, his eyes looking askance, as if he had been afraid to encounter the eyes of any one, for fear of betraying his secret thoughts; while his movements were sudden and rapid, each a bound rather than a walk. In his own Memoir, which he composed in prison at the request of the authorities, and which is clear and connected, he ascribes his impelling motives to the homicidal act, and gives the history of his wanderings for the month immediately after it, and of his surrender to justice. The following is an extract from that singular document:—

"I loved my father much—his misfortunes touched me; the dulness in which I saw him plunged, the continued troubles which he endured—all touched me exceedingly; all my ideas were carried towards these things, and became fixed there. I conceived the frightful project which I have executed; I thought of it for a month before: I forgot entirely the principles that should have made me respect my mother, my sister, and my brother. I looked

* There had been insanity in the family of Rivière.

Upon my father as being in the power of enraged dogs or barbarians, against whom I should employ arms; religion forbade such things, but I forgot all its rules; it seemed to me that God had destined me for that, and that I should exercise his justice; I know human laws, the laws of the police; I thought myself wiser than they; I looked upon them as ignoble and shameful; I had read Roman history, and seen that the laws of the Romans gave to the husband the right of life and death over his wife and children; I wished to brave the laws; it seemed to me that it would be glory for me if I immortalized myself by dying for my father. I figured to myself the warriors that had died for their country and for the king; the valour of the youths of the Polytechnic School at the taking of Paris in 1814. I said to myself, these people died to sustain the part of a man whom they did not know, and who knew as little of them, while I should die for a man who loved me; the example of Chatillon, who alone maintained to death the passage of a street, by which his enemies were advancing to take his king; the courage of Eleazer, brother of Machabee, who killed an elephant on which he thought his enemy the king was, although he knew he could be trampled under feet by this animal; a Roman general, &c., &c. All these things passed through my mind, and incited me to do my deed."

Much more of these ravings follow, in which many other historical examples of self-devotion are cited, all as unlike the one meditated by this unhappy young man as it is possible to conceive, till the climax is completed by allusions to the passion of the Saviour, who died for mankind. He thus proceeds:—"When I heard that nearly 50 persons wept when my father sung 'The Holy Water,' I said within myself, If strangers, who are nothing to him, weep, what should not I do who am his son? I took then this frightful resolution, and determined to kill all three; first the two (his mother and sister), because they combined in making my father suffer; as to the little one (his brother), I had two reasons, the one because he loved my mother and my sister, and the other because I was afraid that in killing the two others, although my father should have a great horror for it he would not regret me, when he knew I had died for him: I knew that he loved this child—he was intelligent; I thought that he would have such a horror at me that he would rejoice at my death; and that by being exempt from regret, he would live more happy."

Having taken these fatal resolutions, &c., much follows about Jael, Sisera, Judith, and Charlotte Corday; many wanderings, many resolutions to proceed with and to postpone the fatal act, which was at last perpetrated. It is thus described by the perpetrator:—"Mid-day came, my brother Jules had returned from school; profiting by this opportunity, I seized the hedge-knife, entered the house of my mother, and committed this frightful crime, commencing with my mother, then my sister and little brother, after that I redoubled my blows; I then went out into the court and spoke to the servant, to take care that my grandfather and grandmother should do themselves no harm, and to tell them that I died to give them peace and tranquillity. I then took the road to Vire, wishing to have the glory of being the first to announce the news; I did not go to the village of Aunays for fear of being arrested. I threw my hedge-knife into a field of wheat. As I walked along I found the courage and the idea of glory which had animated me, diminish; and as I went farther on I entirely recovered my reason. "Ah! is it possible," I said. "Monster that I am! unfortunate victims! Is it possible that I have done this? No! it is only a dream!"

Alas! it is too true! Abyss, open under my feet and swallow me up! I wept, I rolled upon the ground, I lay down and looked round upon the different places—the woods; I said, Alas! could I have thought that I should one day have been in this state? Poor mother! poor sister! poor child, who used to go with me to the plough, and was able even to harrow by himself! they will never reappear!" Rivière goes on to say, that with this return of reason his ideas of self-devotion suffered a material change; he avoided the chance of arrest, and wandered in the woods, subsisting on wild strawberries, and occasionally purchasing bread with a few sous which he had when he ventured into a village near the woods. After a whole month's wandering he at last found his way to Vire, and from pure fatigue and exhaustion told his name to a gendarme—was carried before a magistrate, and committed to prison. He formed the resolution, a singular one in his case, to feign madness, or rather imbecility; a resolution, however, which he did not carry out. He was brought to trial, found guilty, and condemned to death. A petition in his favour was presented to the King by the jury on the ground of his unsound mind, supported by a medical report numerously signed, declaring him insane. It is not in the history of the case before us what was the result of the application for the Royal mercy, but we cannot doubt that it must have been successful; it was made for commutation of punishment, still persisting, though in a milder form, in the original absurdity of condemnation in such a case at all.

It will at once occur to the phrenological reader, that the jury should have kept the power of saving the life of so very undoubted a lunatic in their own hands. It was the duty of the Council to urge this upon them; indeed, we cannot read the evidence on the trial without being convinced that the defence of lunacy was pleaded with the object of obtaining a verdict to that effect. It is consoling to find so many medical judges of the case, with Esquirol and Orfila at their head, unhesitatingly pronouncing this poor creature utterly irresponsible. One medical witness throws his knowledge, or rather his ignorance, into the other scale; and we quote his opinion, because it is supported by reasons which would have passed for sound, and consigned a lunatic to the gallows, even in Britain, no longer than ten years ago. M. Bouchard, summoned and interrogated regarding the sanity of Peter Rivière, replied, "P. R. is not insane; and that for two reasons—first, because in studying his physical constitution we find no cause which can have deranged his cerebral functions; and secondly, because his mental state cannot be ranged under any of those classifications adopted by authors (!) P. R. is not a monomania, because he is not delirious upon one subject; he is not a mania, because he is not in a state of continual agitation; he is not an idiot, since he has written a memoir full of sense; lastly, he is not out of his wits, as is easy to be seen. Therefore (!) P. R. is not insane." It might be thought that the folly of this notable opinion should have adorned one physician only in the year 1835. Not so, however; the minutes state that four physicians were present, two were of M. Vastet's opinion (for insanity), and two of M. Bouchard's. It was at a subsequent consultation of physicians in Paris, who had not been examined at the trial, that by a unanimous report on his case, P. R. was declared insane.

We have not the advantage of seeing this homicidal mania's head; but we can easily believe that it will exhibit a large and unbalanced destructiveness and secretiveness. This development, added to his eccentric manifestations and his constitutional cruelty, the case being yet further strengthened by his

hereditary taint, should have brought his case to a consultation long before he arrived at the stage of shedding human blood. His bird-crushings and frog-crucifixions should have consigned him to treatment in an asylum for his own sake as well as for the public safety years before his last tragedy. An experienced physician of the insane would have declared it quite as dangerous to have him at large before as after that act. His case, in its general character, belongs to a class that of the Howisons, and Legeres, and others, described in the pages of the *Phrenological Journal*. Rivière's reading excited him to shed blood. It is such subjects as he that should never hear of or see blood shed. Presence at an execution, or other cruel punishment, would have roused him to commit some dreadful act. Like Howison, Rivière endeavoured to elude justice, and resolved, if in its hands, to deceive it. The return of self-possession—for temporary only it would have been—will from these and many other cases be found to be so usual as to be of the nature of a natural reaction, rather confirming than weakening the force of the other proofs of insanity, while his conduct subsequent to the fatal act, which, when profound ignorance on the subject of insanity prevailed, would have been called "method in his madness," a phrase which has sent many a lunatic to execution, would only increase the decision with which the really skilful and informed would declare him fit only for the constraint and care of a properly-governed lunatic asylum.

CURE OF PALSY BY MESMERISM.

To the Editor of the 'Medical Times,'
Conduit Street, June 25, 1842.

SIR,—This morning the Rev. Mr. Lewis, of Childerditch, called upon me respecting the health of his son, and remarked that he had seen Mrs. Brett, of Hanningfield, the day before, perfectly well; that she had been perfectly well now for above three years; and that her cure was most wonderful. I may add, that all the usual means had failed, before she came up to town and was mesmerised.

I had received a similar report occasionally from various quarters; but the last document I possessed was the following:—

West Hanningfield, June 8, 1839.

DEAR SIR,—I have much pleasure to inform you, that my wife has been quite well since her return home. My wife sends her kind respects to you, and to Mr. Wood, for your kind attention to her.—I remain, your humble servant,

JOHN G. BRETT.

Now Mrs. Brett came under my notice through my friend the Rev. Mr. Jesse, who, after having been convinced of the truth of Mesmerism by the facts I showed him, asked me if I had any objection to subject a small farmer's wife to its influence, who had been afflicted for five years and had received no benefit from the means employed by the various medical men of the county. I assented; and the woman came up, with the following letter of introduction:—

Margaretting, Ingatestone, Feb., 1838.

DEAR SIR,—I send you a singular patient. You will excuse my troubling you.

CASE.—Martha Brett, when aged 28, was attacked, five years ago, after her third accouchement, by a disease which deprived her of the use of her right side for about three weeks; then recovered, and for a week was able to attend to her family. After that, lost her strength again during two days every week, for several weeks—then thrice a-week—then four times—at present, is quite incapable of doing aught five days in the week.

The disease comes on during sleep, and leaves her during sleep. If disturbed in her sleep on that night on which the use of her physical power ought

(according to custom) to be restored to her for the next day following, the disease continues twenty-four hours longer. She is now thirty-three years old; has had two children since her disorder came upon her; general health has always been good, and at this time she can, on well days, attend to the concerns of her family.—Yours,

W. JESSE.

I found this to be a most curious case of *intermittent hemiplegia* of the right side; that the paroxysm always began in sleep, with a severe fit, and with pain of the head that was almost instantly followed by the palsy and continued during the first day only of the palsy; and that the palsy lasted four or five days, though originally but two. The pain was chiefly at the top of the head, and constantly existed in a lower degree. The palsy was of motion; but there was a certain amount of numbness. When seized she was obliged to rise in her bed, and had a catching in her breath. The recovery from the palsy invariably took place with a severe fit, of half an hour's duration, and was incomplete for the first two or three hours. The affection began three weeks after her third confinement, with severe pain of the back of the head. She got into the house with difficulty, went to bed, had two shivering fits, fell asleep, and awoke with the loss of the use of her right half; and the palsy continued for three months, when it gradually subsided, and in two or three months she had another attack in the night, that lasted the day and ceased the next night. From this time the attacks came about once a month, till she was again pregnant about nine months after the commencement of the disease. During the first part of her pregnancy the attacks were not so frequent; but, during the last fortnight, continued for four or five days. They recurred in a month after delivery; and about every month up to the time of her next confinement at the end of two years, though at the beginning of this pregnancy also the intermissions were longer. For the first three months after this, her last, confinement, she was free; but the attacks returned, at intervals of a month at first, and then more and more frequently, lasting also longer and longer. The catamenia had appeared but three times in the last year and a quarter, and were scanty: they had been absent for the last ten months. Her bowels, though sluggish, were regular when she was about; but would not act for four or five days, if she was still.

I requested my friend Mr. William Wood to mesmerise her daily for half an hour. This gentleman had been my clinical clerk in University College Hospital, and most indefatigably assisted me in all my mesmeric investigations, fixed upon what he knew to be true, and thus regardless of the miserable professors and those weak students who so sadly forgot themselves. Mr. Wood began to mesmerise her on Feb. 22, 1839. She had experienced an attack in the night, and was then paralysed in her right half, and suffering from headache. The process increased the pain in her head, and gave her pain between the shoulders; it caused her also a difficulty in opening her eyes, that ceased as soon as the process was over. While her eyelids were closed she continued moaning. Mesmerism was repeated daily till April 29th, when she went home perfectly well.

The following particulars, from Mr. Wood's notes, may be interesting:—

Feb. 23. The same effects were produced as yesterday, but in a higher degree; and she likewise felt so faint that she slid down in her chair, but her face was not pale nor her pulse altered.

24. Effects the same, but greater; she could not speak till the mesmerism was desisted from

for a few minutes, when she begged it might not be continued; she said she had felt sleepy. The greater part of the effects were removed by transverse passes. Had pain in the arms and head.

25. Soon after going to bed last night she went to sleep, and during the sleep the palsy ceased *without a fit*, which before had *invariably* succeeded its cessation. She was mesmerised to-day for half-an-hour: the eyes closed, and were opened with the greatest difficulty; the faintness was much increased.

26. Head much better; a good night; effects as before, but pain of back greater.

27. No return of the palsy. *This is the longest intermission she has had for months.* She suffers from nervous tenderness of the spine, that is much augmented during mesmerising.

28. Palsy returned last night.

March 1. Palsy continues, but she is not so helpless as formerly. During mesmerising, in addition to the other symptoms, shivered, and felt a sensation of cold in her head.

2. Palsy last night, *without any fit.*

3. Lost herself, she said, for a minute or two, while being mesmerised to-day. The sensation of cold increases for some time after the process, particularly if she has not been thoroughly awakened, and she then feels stupid and requires a question to be asked her several times before she understands it.

4. During almost the whole time of mesmerising the sensation of coldness is such that her teeth chatter, and she slips down in the chair.

7. The palsy returned last night; *so that the intermission has lasted five days.*

8. Palsy ceased last night; *having thus continued but twenty-four hours.*

9. Head better; slept at night pretty well: said she had been asleep during the mesmerising; still this sensation of coldness, but no increase of the pain of the back, from mesmerising.

10. *Feels much better.* Slept during the process, and had less sensation of coldness.

11. Slept well last night; head better; *not so well as now since she first came to town*; pain in back much less; slept a long time during the process.

16. Palsy returned last night; *so that the intermission lasted nine days: the palsy was less intense.*

17. The palsy ceased last night; *having thus again lasted but twenty-four hours.*

28. *The tenderness of the spine is nearly gone; and the headache is subsiding.*

April 14. *The catamenia, which had been very irregular for nearly four years, and entirely suspended for nearly twelve months, have returned to-day.* The tenderness of the spine is quite gone, and the headache is much better.

20. *Scarcely any headache; feels in much better health than she has done for years.* It is arranged that, if she remains free from an attack of palsy and has no headache at the end of another week, she shall return home.

29. *No return of palsy since it ceased on the 16th of March, viz., above six weeks; no headache; feels perfectly well in every respect.*

Her daughter, instead of Mr. Wood, has mesmerised her for the last four days, and produced the same effect. She is now to return home and be mesmerised by her daughter, daily, for some time. She always closed her eyes soon after the process was begun, and said she should otherwise feel sick; probably, Mr. Wood remarked, from the movement of the hand, because she did not feel sick if either the hand was held still or her eyes were closed.

This beautiful cure was accomplished, I may observe, with but moderate sensible effect; and

I have seen patients cured of various diseases with almost no sensible effect. A sensible effect, however, renders the cure more probable; and the more so, the stronger the sensible effect.

This cure is the more striking, because *her sister had an attack of the same disease, hemiplegia, after her confinement, that lasted five years, during which she had two other fits, and she then died.*

After Mrs. Brett's return home, I begged her to shew herself to a Cambridge Fellow of the College of Physicians. The following is an extract from his letter to me:—

May 7, 1837.

I was much gratified last Friday by a Mrs. Brett and her daughter calling on me, by your request, that I might witness the agency of Mesmerism, as performed by the daughter on the mother, and who set her to sleep within half an hour, in my library, by the manipulations which she practised. Mr. ———, the surgeon, was present also, and the act was interesting. I will not, of course, occupy your time, or exhaust my paper, by worrying you with my opinion of the process, or the science, or the art, or whatever it is. I class it amongst the effects of the mind on the body in persons whose faith in it is strong; and *I believe that where is no faith there would be no effect*, which sums up my view of it in a few words. *Infatuated as I hear and know you to be*, you will, of course, smile at my scepticism. It will not be the first occasion of your pitying my ignorance; and possibly, had I the advantage of your society and information, I might change my opinion, and be a proselyte; but, as it is, I view it in the light I mention.—Yours sincerely,

This wise opinion must amuse all conversant with Mesmerism; knowing, as they do, that the effects may be produced without the possibility of the knowledge, on the part of the patient, of what is doing, at a distance, in sleep, by means of inanimate substances, and in idiots; and that certain of the effects could never, in their nature, be produced by mental impressions. But it particularly amuses me, from the circumstance of seeing in Mr. Wood's notes, made before the patient left London, that "she had no idea of mesmerism, wondering always at finding herself so sleepy during the process; was no less surprised at finding herself rapidly recovering, although she took no medicine, and nothing apparently was done; and, when cured, said that she had thought the object of her coming to town was to undergo some dreadful operation, and had consequently expected every day that it was to take place, and was not a little astonished to find the treatment so simple and at the same time so efficacious."—I have the honour to be, &c.,

JOHN ELLIOTSON.

ROYAL COLLEGE OF SURGEONS, LONDON.

List of gentlemen admitted members on Friday, June 21th, 1842:—

Thomas Hitchcock Clark, James Mayer Carey, John Duke, Thomas Burdon Ward, Joseph Yellowley Gibson, John Bold Hyams, Thomas Robertson, Edward William Pilgrim, James George Risk, James Honeywood, John Collis Browne, Henry Penrith Allison, Frederick George Hammack, William Brett.

Admitted Monday, June 27th, 1842:—

Thomas Prince, Allan Brown, John Gregory, Alexander Gallye Lamotte, Frederick William Alexander, Francis Seymour Haden, Henry Martin Holman, John Findlay.

Admitted Friday, July 1st, 1842:—

Edward Lawford, William Garbutt Taylor, Edward Lloyd, Matthew Robert Scraggs, Henry Cline Fixott, George Paul Atkinson, Peter Magenis, John George Lime, John Burford Carlill.

TO CORRESPONDENTS.

Hamburg.—We have received a communication from Dr. Oppenheim, calling attention to the total destruction of the Medical Library of Hamburg by the late dreadful conflagration, and soliciting advice and assistance to enable the medical men there to acquire possession of a new Library. Though aware of similar destitution in large towns and cities nearer home, we should yet be sorry to discourage British aid in so unparalleled a calamity; and as some proof of sympathy, shall be happy to present the "Hamburg Medical Union" with copies of our Work from the commencement.

Spectator (Edinburgh).—We have received two clever anonymous letters under this signature reflecting very severely on the professional and moral character of Mr. Miller, one of the candidates for the Chair of Surgery in the Edinburgh University. Our rule is fixed—anonymous authority is no authority where a gentleman's character is in question.

A Constant Reader of all the Journals.—The fact is, that the petty Journal in question has been using our leaders, without acknowledgment, for the last eight months. We should feel some pride, perhaps, in the circumstance, if it were not rather a proof of the total mental destitution of the unfortunate scribe, than any appreciation of his contemporary's justness of reasoning. The "transfer" can hardly be called "pilfering," since we take the merit of conceding him the use of our matter as a much wanted, and, therefore, very meritorious alms.

M. D.—Notwithstanding Sir James Graham's assurance, we believe it is very generally understood that the Bill will only be introduced this Session, to give the public an opportunity of considering its contents, and as a prelude to doing something efficient with it next Session.

A Subscriber near Bath is requested to furnish us with the precise date when the Guardians of the Shipton Mallet Union made the present contract with their medical officers. If made after the month of April, there is no doubt that the Guardians can be compelled to obey the regulations of the Poor-Law Commissioners. We shall notice this subject more at length if our Correspondent's answer seems to call for it.

Mr. Braid.—We have received the interesting report of his *Conversazione*, published in the *Manchester Times*. We should gladly give it in our pages, but the limitation of our space makes it impossible. The evidence presented by his cases of insensibility as regards violent, and of extreme sensibility as regards slight impressions, is truly astounding. Can Mr. Braid favour us with a perusal of his "Practical Essay on the Curative Agency of Neuro-Hypnotism?"

* * Our Journal may be ordered of any bookseller or newsman, or will be regularly sent by giving a Town reference, or transmitting a money enclosure, or Post-Office order, either to Mr. J. Angerstein Carfrac, or to the Editor, Medical Times Office.

THE MEDICAL TIMES.

SATURDAY, JULY 9, 1842.

"Ut possumus, quando ut volumus non licet."
TERENCE.

Who shall describe a right the bane, the measureless bane inflicted on man and society by that illegal, but rampant and unpunished monster—Quackery! For how many thousands has it lost the precious hours on which hung their lives' happiness or cureless woe? How many whom an abused nature intended for robust health and useful activity have its sordid practices loaded for life with torturing maladies, utter uselessness, and premature de-

crepitude? And how many does it hourly snatch from the affection of friends, and the duties of society, who, in the hands of science, would have lived long years enjoying their being themselves, and extending enjoyment to the many that depended on them! Yes! multiplied diseases, superadded tortures, premature deaths, are as essential parts of empiricism as ignorance, impudent audacity, and utter deprivation of moral principle.

But how suppress it? The question comes to us from all quarters; medical journalists have as yet attempted no answer; and writers on Medical Reform, from Sir Benjamin Brodie in the 'Quarterly Review,' to Sir James Clark in his recent pamphlet, have looked on the difficulty as insuperable. Where there is a will, however, there is a way, and whatever our notions on the necessity of some evils, this is one for which, we are convinced, it is possible, aye, easy, to find a remedy, and that, too, not such an one as Sir James Graham proposes—the non-appointment of the offenders to offices to which they never were eligible—but one that will effectually crush the monster in all its nocent members. The plan is our own. We some time since promised it publicity, and in now giving it, we pledge ourselves to its consistent support as a plain, practical, and really efficient measure.

Our plan, though simple, embraces more than one clause; all, however, tending essentially to the one end:—

— "Many things having full reference
To one consent, may act contrariously,
As many arrows loosed from several bows
Fly to one mark."

Our FIRST provision, which may be classified as an indirect means, has reference to our own body. OUR MEMBERS MUST NOT ONLY BE COMPETENT FOR THEIR DUTIES, BUT MUST BE SO TESTED AS TO INSPIRE THE PUBLIC WITH CONFIDENCE IN THEIR COMPETENCY. This will be a necessary effect of any enacted Bill of real Medical Reform. The limitation of examining bodies throughout the empire to three, and the greater publicity and importance of the examinations, will, of course, throw higher distinction round those who pass through the ordeal successfully, than the present secret trial before obscure and conflicting tribunals; and will, at the same time, tend to enlighten the public on the extent of scientific knowledge required, not only to make a man useful, but even to secure his being harmless. This provision may effect something, but, of course, will be far from all we want.

Our second step, therefore, is to enact, that every qualified medical man shall be legally entitled to the designation of Doctor. This may be arranged very well, on the plan commonly recommended by most writers on Medical Reform, viz., that of having every medical man either a Bachelor of Medicine and Surgery, or a Doctor of Medicine and Surgery, or a

Doctor of either department. The Bachelor is now called Doctor, by *courtesy*. We would suggest that he should be called Doctor by legal right. For this reason. The fact that all qualified medical men were called, called themselves, and in truth *were* Doctors, would lead to the general impression in the public mind, that medical attendance was only to be procured from gentlemen bearing that name. But this would be of little use if the designation might be assumed by non-qualified men. True; and we would therefore guard against such a contingency by the enactment of penalties against any one fraudulently assuming the name, giving a magistrate summary jurisdiction. Sir James Graham's Bill seems to contain some vague, purblind reference to some provision of this kind, but the clause is so incomplete, that little or no practical good can be derived from it. Indeed, in its *best* form, this portion of our plan will be anything but a complete check. We come now, therefore, to more direct means of grappling with Quackery.

We are not, nor ever were, advocates for the clause in Mr. Hawes' Bill, (so warmly supported by some,) inflicting fine and imprisonment on any person found prescribing a drug under a pecuniary charge. Whatever the wisdom of such a measure abstractedly—of which, however, we entertain great doubts—there is something preposterous in it when considered in reference to the present state of British society. The custom of asking advice, and buying drugs of Druggists, and other non-medical men, is universal—it is one of the fixed liberties of the subject, consecrated by ages of precedents, universality of practice; and habit, feeling, and interest alike set our people in opposition to any *violent* interference in their *right* to self-physic, and injure themselves. There is a vaulting legislation, as a vaulting ambition, which overleaps on the other side, and if anywhere we should avoid that over large law-making which defeats itself, it is surely in England, where more, perhaps, than in any other country, except America, social habits shape and overrule law. Instead, therefore, of attempting to crush Quackery by main force, or attempting *despotically* to make a free people go right, we would humbly recommend gentler, but, we believe, not less efficient means of accomplishing public protection. Our course should vary according to the specific objects to be effected, and we would deal with Druggists, common Quacks, and Empirical members of the profession in a manner modified to their peculiar circumstances.

THE DRUGGISTS.—These should be limited, educated, examined, LICENSED. As there is now a very common impression abroad among the middle and lower classes that they are a sort of doctors, their shops should be made to contain a distinct intimation to the contrary; the words, "Licensed Druggist," or words equivalent,

being required to be placed in a conspicuous part of their shop. To prevent, their venturing to prescribe, the laws should distinctly throw upon them *all* the responsibilities of the result, and take steps to make their punishment, for unfortunate cases, speedy, certain, and adequate. Mala-praxis, a term so long obsolete in law proceedings, should be again constituted a legal offence, and punishments proportioned to the specific character of the ill consequences should be so enacted and enforced, that there might be the greatest facility, and, as far as possible, the greatest certitude of summarily convicting and punishing any Druggist whose ignorant advice had led, directly or indirectly, to injurious results. Thus, a man has lost an eye under a Druggist's care; he lays his information before a magistrate, who either summarily mulcts or imprisons the culprit, or sends him for trial to the sessions or assizes. A man dies under a Druggist's care, and a jury finds that whatever was the immediate cause of death, there is a clear case of mala-praxis. The coroner either mulcts or imprisons, or similarly sends the criminal to the sessions or assizes. This is a system of punishment which, instead of repelling, would enlist the sympathies of the public in its favour, and would be very likely to make a prescribing Druggist a rare animal. We should here add, that the loss of license—if the body of Druggists were properly constituted—would form another very potent penalty.

COMMON QUACKS.—While these should be subjected to the risk of ill consequences like the Druggists, we think it would be of importance to insist that, like hawkers, or dealers in game, they should be licensed, and that they should publicly notify themselves as "Licensed Quacks." The very name, we surmise, would make them scarce. If they have no licenses, they will justly be punished for cheating the revenue; if they have, their sting will be extracted. It is certainly but fair, in a pecuniary view, that men receiving fees for medical advice, who never spent a shilling, or a day's study in their medical education, should be expected to pay the State more than men who have earned the legitimate right of giving advice, by the outlay of much money and many years.

The puffing members of our profession who aim at practice through a most disgraceful notoriety, are hardly to be classed as Quacks. The strong, the overwhelming objection against the latter, is their ignorance of the science they pretend to practise, and this is a charge which the very membership of the former refutes. To coerce these, the power of the body from which they receive their diplomas should be increased, or, if sufficient, vigilantly exercised. A few public expulsions, well advertised, would have a salutary effect on the rest.

We shall close with one word on the patent medicines. It is notorious that the great bulk of these are really worthless for

any malady, and that whatever few are useful in certain circumstances, are often fatally mischievous by their misapplication. Why should not the Government do its duty to the people, by offering them some protection, instead of luring them to their injury, often their ruin, by giving noxious drugs the recommendation of a royal stamp? We do not ask it, however, to abandon the immense income it is now receiving from this source—we know the request would be useless—but we may fairly ask it to see that such dangerous compounds should at least have something on their face to warn the ignorant against fraud and misrepresentation, and that if the medicines must be called *patent* for the Exchequer's sake, they should be called "Quack" for the sake of humanity. If every Quack had "Licensed Quack" written over his doorpost, or on his parcel, and every bottle of the Balm of Gilead, and every box of Morison's Pills bore "*Patent Quack Medicine*" on its front, the world would be troubled with no more leaders from us on the necessity of suppressing empiricism.

COURSE OF LECTURES ON THE THEORY AND PRACTICE OF MEDICINE.

Delivered by C. J. B. WILLIAMS, M.D., F.R.S., Professor of the Practice of Medicine, and of Clinical Medicine, at University College.

GENTLEMEN,—The last point we considered was *deficient tonic*; and we shall now say a few words upon the opposite modification, viz., its *excess*, for we may have too much tone as well as too little. In this condition, the muscles are so firm that they have scarcely room for their proper exercise. The heart acts forcibly; the pulse is full and strong, owing to the tension of the vessels; the secretions are scanty, the urine high-coloured, the skin hot, and the bowels constipated. Such a state is ready to pass into many vascular diseases; there is liability to inflammation, gout, hæmorrhages, and various plethoric maladies. The object of treatment is the reduction of the vascular tone—blood-letting will only afford temporary relief, because the vessels can speedily refill. We must endeavour to *keep up* a diminished supply of blood in them by increasing the *secretions*; we must also relax the fibres by exercise, warm bathing, diet, &c. Great assistance may be derived from the administration of *antimony*—it seems to have some peculiar efficacy in causing *relaxation* of the fibres.

The next element that we shall consider is *sensibility*, or that property whereby we are made conscious of the impressions received by external and internal agents.

1st. This property may be *exalted*, so that stimuli produce a greater impression than usual, and parts in which we have no sensations under ordinary circumstances become highly sensitive and painful.

2nd. It may be diminished, as in paralysis, in which case stimuli that usually produce sensations, fail to make any, or a similar impression.

3rd. It may be *perverted*, and a part acquires *new feelings*, the common sensations being diminished: thus, when our feet go (as it is called) to sleep, and we touch them, or press them upon the ground, we experience a feeling like that of pins or needles being run into the flesh. *Itching* is generally given as an example of depraved sensation; but I think it is only an exaltation of the common property of the nervous system, on which you, of course, know that sensation depends.

Diseased sensibility may be owing to some cause acting either upon the roots or the branches of nerves. *Exalted* sensibility is very commonly produced by the rapid circulation of blood through the nervous centres, but we may have it arising also

without any inflammatory action, as is seen in cases of tetanus, hydrophobia, &c.

On the other hand, sensation is rendered *defective* by causes producing compression upon the nervous system, such as effusion of blood, stagnation of the circulation, &c., or by the operation of narcotic poisons, &c.

Again, we find *perverted* sensation resulting from slow, structural changes in the brain, such as softening, &c.; but such perversion may also exist from causes of a much less serious character. Thus, for example, in hysteria, we have presented to us very remarkable modifications of the property of sensibility.

Many persons are extremely sensitive, without showing any special symptoms of disease. Delicate females, for instance, suffer from causes that others would regard as the most trivial and childish. This exalted function greatly modifies other affections, rendering them much more painful and distressing. Such subjects are usually characterised by want of tonic in the muscular and vascular systems; they are peculiarly liable to functional diseases, also to epilepsy, neuralgia, &c.

On the contrary, a low degree of sensibility is generally associated with a *great* amount of *tonicity*. Persons with obtuse feelings are exempted from liability to a large class of maladies, and the complaints from which they do suffer may proceed to a considerable extent before the blunted sensibility of the system takes cognizance of them. They are prone, chiefly, to local congestions, plethoria, apoplexy, gout, costiveness, &c.

Perverted sensibility is combined frequently with exalted sensibility. We may have exalted sensibility in one part causing convulsions, and defective sensibility in another part amounting to anæsthesia. Among the more common perversions are feeling of lumps in the throat—sensation of balls in the side. The appetite, too, is sometimes strangely modified; hysterical females will eat mortar, soil, paper, and dirt of all descriptions.

The *causes* of these varieties of sensibility are not always easily explained: the case is more simple when these states of the nervous system are only *partial*. A tumour pressing upon a nerve may at first exalt the sensibility; afterwards, it may modify it, and at length destroy it altogether. For the existence of sensation the circulation of blood is required, and whatever modifies such circulation will also modify the sensibility.

We are not conscious of impressions made upon many of the *internal* parts of the body in a healthy state: thus, we do not feel the contact of food with the stomach, nor the passage of the contents of the intestines, so long as these viscera are in a sound condition; but if perforation of the intestine should occur, and a portion of the substances enclosed should escape into the peritoneal sac, the most intense suffering may arise. Pain, then, is generally the result of disease, and is to be removed by altering the morbid state of the parts that produce it; but in some cases we have to treat the pain *itself*, as though it were, in fact, the disease, and not a mere symptom; as, for example, in neuralgia, the passage of gall-stones, &c. Violent pain soon induces prostration; it may stimulate at first, but if it continues it must be followed by exhaustion. It may also cause other morbid effects more indirectly; thus in severe pleurisy, the excessive pain that is excited by full inflation of the lungs will lead the patient to repress breathing, and thus, of course, the important function of respiration must be seriously injured. The remedies for the alleviation of pain are of two kinds, viz., *narcotics* or *sedatives*, which allay it temporarily; and secondly: *nervous tonics*, which diminish the susceptibility to future impressions: of the latter class, the nitrate of silver, sulphate of iron, sulphate of copper, and trisnitate of bismuth are the best.

A *want* of sensibility may also become an element of disease: for instance, if the sensibility of the bladder is diminished, that viscus may become over-distended, and thus be the groundwork of serious consequences.

Another kind of sensibility is that belonging to the organic processes; viz., circulation, secretion, respiration, &c. We know that these are greatly influenced by the mind, although not *controlled* by it; this is seen in palpitation of the heart, &c.

One organ that is diseased may affect another organ by what is termed sympathy: examples of this are noticed in the influence exerted upon the breast by affections of the uterus, upon the head by derangement of the stomach, and upon the testicles by diseases of the kidneys. It is not absolutely established that these sympathies are conveyed through the nerves, still there is strong analogy in favour of the conclusion. We find excessive sympathy constantly connected with *nervous* irritability, as in chorea, &c.

We shall now direct our attention to another element of disease, viz., *Disease of Secretion*. Secretion is a vital endowment: it is a chemical process, but one that we cannot imitate. The difficulty arises from the elective power which certain parts have to separate certain matters—we cannot explain it. The most common causes of alteration are the deviations of the *vascular* system; we accuse either the *vessels* that convey the pabulum of the secretions, or the *blood*, which is the pabulum itself. We also know that *nervous* influence has a serious effect upon the secretions, sometimes rendering them excessive, and in other cases causing their prevention.

Secretions may be divided into those that are *recrementitious*, and those that are *excrementitious*.

1st. Secretions may be *excessive*; one morbid result of which state is the weakening of the body, and this weakening will be in proportion to the amount of *animal* matter contained in such secretion. The injury accruing to the system will depend also upon the particular secretion that is altered. Thus, augmented secretion of urine may produce only a little temporary inconvenience; whereas, a greatly increased flow of bile may cause very considerable irritation, in consequence of the extent through which it has to pass. Again, secretion of mucus in the stomach can be productive of very little mischief, but if it occurs to any great amount in the bronchial tubes, very serious results may follow in consequence of the impediment thus occasioned to the respiratory process. If there is an increased secretion of one organ without some corresponding excretion from another organ, the *blood* is almost sure to become diseased; and one chief object is to restore the balance which has been lost, for unless this be restored the *system* must suffer. But we must be careful not to pass a certain limit, or we may defeat our own intentions; for example, if our desire is to stimulate the kidneys and increase the flow of urine, we must be cautious to avoid the use of too violent measures, or we may *over-stimulate* the kidneys, and thus prevent the secretion of urine altogether or cause merely a serous discharge in its stead. Excess of secretion into serous cavities produces a separate species of disease, viz., dropsy.

2nd. *Defective Secretion*.—Every deficient discharge may give rise to fulness of the vessels. Defective secretion of the urine or bile may produce general plethora, and relief be effected by a discharge from some other part, such as by dropsy, hæmorrhoids, &c. The influence of arrested secretion of bile may be said to have a double operation; thus it would cause, as it were, a *forward* inaction by its defect, producing constipation, &c., and a *backward* action upon the system, in consequence of the matter not being removed in proper quantity from the *blood*. If the secretion be of little general importance, a mere *local* fulness and inconvenience may result—as irritation of the eye, proceeding from a deficient supply of fluid for its lubrication—or inflammation in a joint, occasioned by defective secretion of synovia. If the mucus of the intestines or urethra be too scanty, there will be a local injury produced; but if the secretion impaired be one of *general* importance, the system *generally* will suffer: thus, if the supplies of the gastric juice be arrested, its influence must extend far more widely than the mere excitement of local gastric congestion.

The arrest of excretions may cause very serious disease: for example, the suppression of the bile and urine is followed by the supervention of a *typhoid* state, with a disposition to coma. There is much more danger attending the *suppression* of a secretion than the *retention* of it, and reabsorption after it has been secreted. The worst of all suppressions is that of carbonic acid from the blood in respi-

ration. There are some secretions that may be arrested without producing all the serious results that we have mentioned: thus, for example, there is very little danger of a typhoid state resulting from suppression of the catamenia or of the milk; the tendency produced in such a case would be to plethora and inflammation.

3rd. Secretions may be *perverted*: and this generally happens when they are either much diminished or much increased. We find these alterations among the most important symptoms in febrile and inflammatory disorders, and we direct our remedies in a great measure to obviate such changes. We give aperients to improve the secretions of the alimentary canal, and we give saline medicines to correct the secretions of the kidney and the skin; and we must conclude, from the benefit derived from the proper restoration of these functions, that their derangement forms a very essential element of the disease. In fevers, we find the watery parts of the urine frequently diminished, and there is a proneness to decomposition in the other constituents. Critical discharges may either be a cause or an effect of an improvement; it seems as if the *materies morbi* were thrown off, and restoration thereby promoted. With regard to other secretions, we can easily imagine how their depravation would produce mischief: thus, if mucus, which, when healthy, sheathes and lubricates the parts on which it is secreted, becomes thin and acrid, it is clear that it must cause irritation; or if it becomes tough and viscid, it will clog up the passages that it ought to render moist. So, again, if the gastric juice becomes depraved, it will cause *indigestion* instead of causing *digestion*.

Sebaceous glands are intended to secrete a substance for the moistening of the skin; but if the secretion is diseased, the matter forms in little hard knots, and thus impairs the beauty of the skin.

Depraved secretions may cause disease by accidental qualities, as calculi formed from the urine or the bile; also, collections of hardened feces in the alimentary canal.

Nutrition may be said to be a secretion; but still it is also a structural alteration, and will be better considered at a future time.

MEDICAL SECTION OF THE BRITISH ASSOCIATION,

Assembled at Manchester June 23 and following Days.

President—E. Holme, M.D. Vice-Presidents—J. L. Bardsley, M.D.; C. B. Williams, M.D. Secretaries—Dr. Sargent, and Dr. Clayton.

FOURTH DAY.

At the commencement of this day's proceedings the audience was very thin.

A very lengthy communication from Dr. Laycock, on Vital Periodicity, was read by the Secretary (Dr. Sargent), in which a vast number of facts were related, establishing periodicity not only in diseases, but in sound health, and not only in man, but in the lower order of animals. Such facts had been noticed very particularly by the ancient writers on medicine, Hippocrates, Celsus, &c., which led to the establishment of critical days in the treatment of various diseases, often rendering their prognostications very certain; indeed, Dr. Laycock stated that in many instances certain periodic changes took place in health as well as disease, establishing the same law, that he (Dr. L.) felt little doubt that the time of birth had reference to the time of death. The views of this paper coincided very much with what had been promulgated by Mr. P. Catlow the day before, and tended greatly to establish his (Mr. C.'s) principles.

Dr. SARGENT agreed with many of the author's views, and stated the subject to have interested him in no trifling degree.

The CHAIRMAN expressed himself a convert to vital periodicity; but thought the author's ideas were carried a little too far in respect to the lower order of animals. He referred to insects' change from the pupæ, in which he

(the Chairman) thought some little error had crept in. Taking the subject as a whole, however, the theory was one of considerable importance, and deserved closer investigation.

Dr. CLAY thought the views entertained were singularly illustrative of Mr. Catlow's views the day before.

Dr. Clay was then called upon for his communication respecting the Treatment, &c. of Diabetes, in which the author endeavoured to prove, in respect to the various plans of treatment adopted, that of the tonic and astringent, had been most successful, if statistical statements were to be relied upon; that the views entertained by the older writers as to its being unquestionably a disease of debility, were correct, as statistics proved. Dr. C. then gave the particulars of three cases in which the tinct. ferri sesquichloridi, assisted by animal regimen, had been eminently successful, after every other means had failed, although assisted by strict animal regimen. The cases produced were very satisfactory. Dr. C. enforced, as particularly necessary, the testing of the article (tinct. ferri sesqui.) before using it as a curative; the adulteration of drugs was to such an extent that failures in their exhibition were certain, if not tested previously, a circumstance which he thought explained why many excellent practical suggestions—as to treatment—in disease had fallen into disrepute. The author then enumerated cases in which treatment analogous to his own had been successful, showing the strongest evidence in favour of the tonic and astringent plan.

The CHAIRMAN observed, that he did not fully coincide with Dr. Clay, that diabetes mellitus was only another stage of the insipidus. He (the Chairman) would relate a circumstance that fell under his own notice some years ago:—A quantity of urine from a diabetic case was put into a bottle, well corked, and put into a cupboard, for future examination. It happened, however, to be entirely forgotten till many months after, when it was found the diabetic character had entirely vanished, and it was as free from sediment, sugar, &c. as the purest water. The disease was evidently one of great mystery, and on the treatment of which the profession held very conflicting opinions. Practical illustrations were at all times valuable.

FIFTH DAY.

June 28.—In consequence of Mr. Wilson's paper on Lithotomy and Lithotripsy having been omitted the day before, it was taken first to-day. It is needless to observe that Mr. Wilson's (of Manchester) experience as a lithotomist and lithotriptist added considerable interest to his paper. He (Mr. W.) entered largely on the statistical success of the two operations, jointly and separately; and in speaking of the value of the operations comparatively, he (Mr. W.) preferred the old operation in children, but fully approved of lithotripsy in the adult, if not pushed to near old age, and avoiding very irritable constitutions. He thought the better success of modern operators entirely owing to their cautiousness in the selection of their cases. Mr. Wilson then related some remarkable cases of both operations, not by any means omitting the unsuccessful ones.

The Chairman announced his regret at not being able to allow discussions on this and the following papers of the day, as it was the last day, and the number to be read would not allow of it.

Professor OWEN then came forward and referred to a memoir 'On Fibre,' by Dr. Martin Barry, just published in the Transactions of the Royal Society; and communicated the principal results of the researches therein detailed. In the

red-blood disc, in muscle, in nerve, and in other tissues, Dr. Barry has represented filaments having a flat, grooved, and compound form, such as would be produced by two spiral threads running in opposite directions, and interlacing. In some instances it is possible to see that this really is the structure of the muscular fibril; and Dr. Barry showed to Prof. Owen and to others, who were present, a muscular fibril so composed, the two spiral threads of which were separated at the end, where the fibril had been broken off. When the fasciculus in voluntary muscle breaks off short, or becomes notched, Dr. Barry states, that it is from the presence of large interlaced spirals, which surround minute bundles of fibrillæ, and necessitate a fracture directly across the fasciculus. These large spirals produce transverse striæ. They may be represented by the fingers of the two hands, when made to alternate with one another, and viewed on the extensor side. This state of the fasciculus is well seen in muscle from the leg of the boiled lobster. The membrane investing the fasciculus is formed of coalesced spirals. Transverse striæ are sometimes produced by the fibrillæ themselves, being rows of spaces between the curves of their spiral threads. It appears to have been these minute curves of spiral threads that misled observers into the belief that the muscular fibril had a beaded structure. In nerves it is by no means difficult to discern, not only that the "white substance" consists of filaments, but that filaments are present having the remarkable appearance above mentioned. Fibre, according to Dr. Barry's observations, is re-produced by self-division, and spirals coalesce into a membranous form; in undergoing which changes either all trace of the structure in question is lost, or the only part of it discernible is a dark central line.

The nature of the blood-corpuscle and its uses in the economy, Prof. Owen stated to have been explained by Dr. Barry. He announces the important fact, that in this corpuscle there is formed a filament, such as that which he finds in all the tissues of the body. Prof. Owen added, that he himself had had many opportunities of seeing these filaments in the corpuscle of the blood. The production of filaments out of blood corpuscles, Dr. Barry finds to be the essential circumstance in the coagulation of the blood; a process attended by the evolution of red-colouring matter, and producing appearances strongly resembling some of those met with in the tissues. In these examinations it is desirable to use the blood of some animal having the corpuscles large, such as the frog, or newt. In order to see distinctly the filament within the blood corpuscle, Dr. Barry adds some chemical reagent that will remove a portion of the red-colouring matter, without dissolving the filament itself. He has employed for this purpose a compound of mercury, of silver, or of chrome. It has been objected,—"You form the filament with your chemical reagent." But the tendency of such reagents, in a concentrated state, is destructive; and were it not so, would the same appearance be produced by compounds so different as those of mercury, of silver, and of chrome? Besides which, the peculiar form of the filament entitles it to be considered, not as a chemical compound, but as an organized structure; the filament, however, may be discerned after coagulation has commenced, without the addition of any chemical reagent. Coagulating blood contains discs in two different states; the one comparatively pale, the other very red. It is in the latter discs that a filament is formed; and it is these discs which enter into the formation of the clot; the former, or pale discs, being merely entangled in the clot, or else remaining in the serum. Dr. Barry thinks that the filament escaped the notice of former ob-

servers, from their having directed their attention almost exclusively to the undeveloped discs which remained in the serum, and thus conceived that the blood-discs are of subordinate importance, and are not concerned in the evolution of fibrin. The remarks of the Professor were received with great attention, at the conclusion of which Dr. Black (of Manchester) wished to ask a question, but the Chairman stated that he had already said that no discussion could be allowed, as there were other papers, and very little time for them.

Dr. CARSON then read his paper on the Uses of the Muscular Fibres of the Bronchial Tubes, but from the low voice of the reader, it was next to impossible to state the contents of the paper without danger of misrepresenting the statements contained in it.

Dr. RICHARDSON then was called upon, but Dr. Carson took advantage of the moment to introduce a case to the meeting of Paralysis in the Serratus Magnus (although no notice had been given of his intention). The man exhibited to the meeting showed an entire paralytic rest, and partial absorption of the serratus magnus, with a tremulous motion of the scapulæ, with rigidity and thickening of the supra and infra spinal scapular muscles, and an evident enlargement of the left deltoid.

Dr. RICHARDSON then briefly related his case of Asphyxia, in which the recovery took place after a very considerable lapse of time.

Dr. CLAY then read his paper, entitled, *The Evils Arising from the Use of Common Pessaries*. It refers to the operations recommended for the removal of prolapsus and procidentia uteri, and to the introduction of a new pessary, calculated to procure effectual and permanent relief, avoiding the evils of former means. Dr. Clay entered on the various methods of treatment practised for prolapsus, &c., and showed, in the plainest manner (illustrated by large diagrams), how contrary to every principle of mechanism such instruments had hitherto been, as well as contrary to the structure and arrangements of the parts to which they were applied. Dr. Clay inadvertently in very strong terms on the operations proposed as curatives for prolapsus, &c., stating, that next to his own pessary, the old T bandage was decidedly the best; adding, that the pressure on the perineum by Hall's abdominal supporters was calculated to bring on injurious results. Dr. Clay then exhibited his improved pessary to the meeting, which was allowed to be a very effective instrument, and a very decided improvement on the bungling mechanical surgery hitherto existing.

Mr. TURNER inquired if it had been largely applied; how long it had been worn by any one case, and if any irritation was caused by it?

Dr. CLAY replied, it had been tried in from 70 to 80 cases, and in no one instance, to his knowledge, had it failed; it was worn with perfect ease, and caused no irritation, and had been worn for two or three months in succession, but was always removed at bed-time, and applied again before rising in the morning. [It is unnecessary to describe the instrument, as it has already been noticed in the *Medical Times*, although briefly, and the paper will probably appear in full in the same Journal.]

The meeting had now become so thin, that Dr. D. Hulme did not communicate the paper of Dr. Fowler on Observations, Physiological and Practical, on the Treatment of Diseases; but merely observed, if medical men would record facts more numerous, and give outlines of their treatment more generally, less conflicting results would follow. The proceedings of the Medical Section here terminated, and it is strange, but no less true, that not the slightest hint was thrown out by the Medical Committee

for the encouragement of the Association in forwarding the interests of the medical community. Not one word of Medical Reform was uttered. On the whole, much valuable information was communicated, but it is to be regretted that many valuable papers were omitted for want of time; this would have been obviated by the presiding officers having been chosen from amongst the medical visitors, instead of those in the locality, whose frequent engagements obliged the section to rise often very early, and prevented many interesting discussions going on. Theoretical papers had the preference over the practically useful class, and evidently had the better audiences. Two papers were read, one in the Statistical Section, and one in the Zoological and Natural History Section, on subjects interesting to the medical profession, the latter of which will be given in our next report; that in the Statistical Section was the consideration of the manufacturing districts in respect to consumption, an abstract of which will be found below.

In SECTION B. (*Chemistry and Mineralogy*) Dr. Playfair, on Thursday, June 30, read the following abstract of Professor Liebig's Report on Organic Chemistry, applied to Physiology and Pathology:—Prof. LIEBIG had been requested, some few years ago, to apply himself to the consideration of vegetable and animal physiology. The Professor's first Report had been read at the meeting of the Association at Glasgow, in 1840. The second he was about to bring before their notice. And in a third, the Professor intended to apply the principles of organic chemistry to diet and dietetics; and under this head would be comprised the nutritiveness of particular vegetables in the fattening of cattle. The first part of Prof. Liebig's Report consisted of the examination of the processes employed in the nutrition and reproduction of the various parts of the animal economy. In vegetables, as well as in animals, we recognise the existence of a force in a state of rest. It is the primary cause of growth or increase in the mass of the body in which it resides. By the action of external influences, such as by pressure of air and moisture, its condition of static equilibrium is disturbed; and entering into a state of motion or activity, it occupies itself in the production of forms. This force has received the appellation of *vital force*, or *vitality*. Vitality, though residing equally in the animal and vegetable kingdoms, produces its effects by widely different instruments. Plants subsist entirely upon manures belonging to inorganic nature. Atmospheric air, the source whence they derive their nutriment, is considered to be a mineral by the most distinguished mineralogists. All substances, before they can form food for plants, must be resolved into inorganic matter. But animals, on the other hand, require highly organized atoms for nutriment. They can only subsist upon parts of an organism. They possess within them a vegetative life, as plants do, by means of which they increase in size, without consciousness on their part; but they are distinguished from vegetables, by their faculties of locomotion and sensation—faculties acting through a nervous apparatus. The true vegetable life of animals is in no way dependent upon this apparatus, for it proceeds when the means of voluntary motion and sensation are destroyed; and the most energetic volition is incapable of exerting any influence on the contractions of the heart, on the motion of the intestines, or on the processes of secretion. All parts of the animal body are produced from the fluid circulating within its organism, by virtue of vitality, which resides in every organ. A destruction of the animal body is constantly proceeding. Every motion, every manifestation of force, is the result of the transformation of the structure, or of its substance. Every conception, every mental affection, is followed by changes in the chemical nature of the secreted fluids. Every thought, every sensation, is accompanied by a change in the composition of the substance of the brain. It is to supply the waste thus produced that food is necessary. Food is either applied in

the increase of the mass of a structure (that is, in nutrition,) or it is applied in the replacement of a structure wasted (that is, in reproduction.) The primary condition for the existence of life is the reception and assimilation of food. But there is another condition equally important—the continual absorption of oxygen from the atmosphere. All vital activity results from the mutual action of the oxygen of the atmosphere and the elements of the food. All changes in matter proceeding in the body are essentially chemical, although they are not unfrequently increased or diminished in intensity by the vital force. The influence of poisons and remedial agents on the animal economy proves, that the chemical combinations and decompositions proceeding therein, and which manifest themselves in the phenomena of vitality, may be influenced by bodies having a well-defined chemical action. Vitality is the ruling agent by which the chemical powers are made to subserve its purposes; but the acting forces are chemical. It is from this view, and no other, that we ought to view vitality. According to Lavoisier, an adult man takes into his system, every year, 837 lb. of oxygen, and yet he does not increase in weight. What, then, becomes of the enormous quantity of oxygen introduced in the course of the year into the human system? The carbon and hydrogen of certain parts of the body have entered into combination with the oxygen introduced through the lungs and through the skin, and have been given out in the form of carbonic acid, and the vapour of water. At every moment, with every expiration, parts of the body are thus removed, and are emitted into the atmosphere. No part of the oxygen inspired is again expired as such. Now it is found that an adult inspires $32\frac{1}{2}$ oz. of oxygen daily. This will convert the carbon of 24 lb. of blood into carbonic acid. He must, therefore, take as much nutriment as will supply this daily loss; and, in fact, it is found that he does so; for the average amount of carbon in the daily food of an adult man, taking moderate exercise, is 14 oz., which require 37 oz. of oxygen for their conversion into carbonic acid. But it is obvious, as the inspired oxygen can be removed only by its conversion into carbonic acid and water, that the amount of food necessary for the support of the animal body must be in direct ratio to the quantity of oxygen taken into the system. Thus, a child, in whom the organs of respiration are naturally in a state of great activity, requires food more frequently, and in greater proportion to the bulk than an adult, and is also less patient of hunger. A bird, deprived of food, dies on the third day; whilst a serpent, which inspires but a mere trace of oxygen, can live without food for three months. The capacity of the chest in an animal, is a constant quantity. We, therefore, inspire the same *volume* of air, whether at the pole or the equator. But the weight of the air, and consequently of the oxygen, varies with the temperature. Thus, an adult man takes into the system daily 46,000 cubic inches of oxygen, which, if the temperature be 77 deg., weigh $32\frac{1}{2}$ oz.; but, when the temperature sinks down to the freezing point (32 deg.), it will weigh 35 oz. Thus, an adult in our climate in winter may inhale 35 oz. of oxygen; in Sicily he would inspire only $28\frac{1}{2}$ oz.; and, if in Sweden, 36 oz. Hence, we inspire more carbon in cold weather, when the barometer is high, than we do in warm weather; and we must consume more or less carbon in our food in the same proportion. In our own climate, the difference between summer and winter in the carbon expired, and therefore necessary for food, is as much as an eighth. Even when we consume equal weights of food, an infinitely wise Creator has so adjusted it as to meet the exigencies of climate. Thus, the fruit on which the inhabitants of the south delight to feed, contains only 12 per cent. of carbon, whilst the bacou and train oil enjoyed by the inhabitants of the Arctic regions, contain from 66 to 80 per cent. of the same element. Now the mutual action between the elements of food and the oxygen of the air, is the source of animal heat. All living creatures, whose existence depends on the absorption of oxygen, possess within themselves a source of heat, independent of the medium in which they exist. This heat, in Prof. Liebig's opinion, is wholly due to the combustion

of the carbon and hydrogen contained in the food which they consume. Animal heat exists only in those parts of the body through which arterial blood (and with it oxygen in solution) circulates. The carbon and hydrogen of food, in being converted by oxygen into carbonic acid and water, must give out as much heat as if they were burned in the open air. The only difference is, that this heat is spread over unequal spaces of time; but the actual amount is always the same. The temperature of the human body is the same in the torrid as in the frigid zone. But, as the body may be considered in the light of a heated vessel, which cools with an accelerated rapidity the colder the surrounding medium, it is obvious that the fuel necessary to retain its heat must vary in different climates. Thus, less heat is necessary in Palermo, where the temperature of the air is that of the human body, than in the Polar regions, where it is about 90 deg. lower. In the animal body, the food is the fuel; and, by a proper supply of oxygen, we obtain the food given out during its combustion in winter. When we take exercise in a cold atmosphere, we respire a greater amount of oxygen, which implies a more abundant supply of carbon in the food: and, by taking this food, we form the most efficient protection against the cold. A starving man is soon frozen to death; and every one knows that the animals of prey of the Arctic regions are far more voracious than those of the torrid zone. Our clothing is merely an equivalent for food; and the more warmly we are clothed, the less food we require. Were we to go destitute of clothes, like certain savage tribes,—or if, in hunting or fishing, we were exposed to the same degree of cold as the Samoyedes,—we could with ease consume 10 lb. of flesh, and, perhaps, a dozen tallow candles into the bargain, as warmly clad travellers have related, with astonishment, of those people. Then could we take the same quantity of brandy or blubber of fish, without bad effects, and learn to appreciate the delicacy of train oil. We thus perceive an explanation of the apparently anomalous habits of different nations. The maccaroni of the Italian, and the train oil of the Greenlanders and the Russian, are not adventitious freaks of taste, but necessary articles fitted to administer to their comfort in the climates in which they have been born. The colder the region, the more combustible must the food be. The Englishman in Jamaica perceives with regret the disappearance of his appetite, which, in England, had been a constant recurring source of enjoyment. By the use of aromatics, he creates an artificial appetite, and eats as much food as he did at home. But he thus unfits himself for the climate in which he is placed; for sufficient oxygen does not enter his system to combine with the carbon consumed; and the heat of the climate prevents him taking exercise to increase the number of his respirations. The carbon of the food is therefore forced into other channels, and disease results. England, on the other hand, sends her dyspeptic patients to southern climates. In our own land their impaired digestive organs are unable to fit the food for that state in which it best unites with the oxygen of the air, which therefore acts on the organs of respiration themselves, thus producing pulmonary complaints. But when they are removed to warmer climates, they absorb less oxygen, and take less food; and the diseased organs of digestion have sufficient power to place the diminished amount of food in equilibrium with the respired oxygen. Just as we would expect from these views, in our own climate, hepatic diseases, or diseases arising from excess of carbon, are more prevalent in summer, and in winter pulmonary diseases, or those arising from an excess of oxygen. The Professor then went on to disprove the notion, that animal heat is due to nervous influence, and not to combustion—an error which had its origin in supposing that the combustion proceeds in the blood itself. He also showed, that animal heat must not be ascribed to the contraction of the muscles. The Professor proceeds to prove, that the heat evolved by the combustion of carbon in the body is sufficient to account for the phenomena of animal heat. He shows that the 14 ounces of carbon which are daily converted into carbonic acid, in an adult, disengage no less than

197,477 deg. of heat; a quantity which would convert 24 lb. of water, at the temperature of the body, into vapour. And if we assume that the quantity of water vapourized through the skin and lungs amounts to 3 lb., then we have still 146,380 deg. of heat to sustain the temperature of the body. And when we take into calculation the heat evolved by the hydrogen of the food, and the small specific heat possessed by the organs generally, no doubt could be entertained that the heat evolved in the process of combustion, to which the food is subjected in the body, is amply sufficient to explain the constant temperature of the body. From what has preceded, it is obvious that the amount of carbon consumed in food ought to depend on the climate, density of air, and occupation of the individual. A man will require less carbon when pursuing a sedentary occupation than when he is engaged in active exercise. Professor Liebig, having thus discussed the source of animal heat, proceeds next to consider what are the ingredients in the food, which may properly be considered to be nutritious. Physiologists conceive that the various organs in the body have originally been formed from blood. If this be admitted, it is obvious that those substances only can be considered as nutritious which are susceptible of being transformed into blood. The Professor then entered upon an examination of the composition of blood, and of the identity in chemical constitution of fibrine and albumen. The nutritive process is simplest in the case of the carnivora. This class of animals live on the blood and flesh of the graminivora, whose blood and flesh is identical with their own. In a chemical sense, therefore, a carnivorous animal, in taking food, feeds upon itself; for the nutriment is identical in composition with its own tissues. The Professor then inquired what from constituents of vegetables the blood of the graminivorous animals is produced. The nitrogenized compounds of vegetables forming the food of graminivorous animals are called vegetable fibrine, vegetable albumen, and vegetable caseine. Now, analysis has led to the interesting result, that they are exactly of the same composition in 100 parts; and, what is still more extraordinary, they are absolutely identical with the chief constituents of the blood—animal fibrine and animal albumen. By identity, be it remarked, we do not imply similarity, but absolute identity, even as far as their inorganic constituents are concerned. These considerations showed the beautiful simplicity of nutrition. In point of fact, vegetables produce, in their inorganic, the blood of all animals. Animal and vegetable life are therefore most closely connected. The Professor has still to account for the use of the substances in food which are absolutely destitute of nitrogen; but which we know are absolutely necessary to animal life. In all these we find a great excess of carbon, and but very little oxygen. By a train of admirable reasoning, the Professor arrives at the interesting conclusion, that they are solely exhausted in the production of animal heat, being converted by the oxygen of the air into carbonic acid and water. This portion of the report contained an ingenious and important view of the use of bile in the animal economy, the truth of which quantitative physiology dare not deny. When exercise is denied to graminivorous and omnivorous animals, this is tantamount to a deficient supply of oxygen. The carbon of the food not meeting with sufficient oxygen to consume it, it passes into the compounds containing a large excess of carbon and deficiency of oxygen; or, in other words, fat is produced. Liebig concludes, that fat is altogether an abnormal and unnatural production, arising from the adaptation of nature to circumstances, and not of circumstances to nature—altogether arising from a disproportion of carbon in the food to that of the oxygen respired by the lungs, or absorbed by the skin. Wild animals in a state of nature do not contain fat. The Bedouin, or Arab of the Desert, who shows with pride his lean, muscular, sinewy limbs, is altogether free from fat. And the Professor points out the diseases arising from this cause. From all that has transpired, we may sum up the nutritious elements of food as follows. The ingredients adapted for the formation of the blood, and which the Pro-

fessor calls the plastic elements of nutrition, are as follows:—Vegetable fibrine, vegetable albumen, vegetable caseine, animal flesh, animal blood. The other ingredients of food being fitted to retain the temperature of the body, he calls the elements of respiration. They are—fat, starch, gum, cane sugar, grape sugar, sugar of milk, pectine, bassorine, beer, wine, spirits. These are Professor Liebig's general principles of nutrition. The second part of the work consists of details, in which he examines the chemical processes engaged in the production of bile, of urea, uric acid and its compounds, as well as of cerebral and nervous substance. The conclusions to which he has arrived on the subjects are of such great and startling interest, that Dr. Playfair said, he dared not venture to make an abstract of them, without entering into the calculations with which they were accompanied. In the Professor's explanatory remarks on digestion, he ascribes a singular function to saliva. This fluid possesses the remarkable property of enclosing air in the shape of froth, in a far higher degree even than soap suds. This air, by means of the saliva, accompanies the food into the stomach, and there its oxygen enters into combination with the constituents of the food, whilst its nitrogen is again given out through the lungs or skin. The longer digestion continues, the greater is the quantity of saliva, and consequently of air, which enters the stomach. Rumination, in certain graminivorous animals, has plainly for one object a renewed and repeated introduction of oxygen. The Professor further touches upon the use of tea and coffee as an article of food. Recent chemical research has proved, that the active principles of tea and coffee—viz., teine and caffeine,—are absolutely one and the same body, perfectly identical in every respect. The action of tea and coffee on the system must be therefore the same. How is it that the practice of taking them has become necessary to whole nations? Caffeine (teine) is a highly nitrogenized body. Bile, as is well known, contains an essential nitrogenized ingredient—taurine. Now, Professor Liebig considers, that caffeine goes to the production of this taurine; and if an infusion of tea contains only one-tenth of a grain of caffeine, still if it contribute, in point of fact, to the formation of bile, the action even of such a quantity cannot be looked upon as a nullity. Neither can it be denied, that, in case of using an excess of non-azotized food, or deficiency of motion, which is required to cause the change of matter in the tissues, and thus to yield nitrogenized matter of the bile, that in such a condition the state of health may be benefited by the use of tea or coffee, by which may be furnished the nitrogenized product produced in the healthy state of the body, and essential to the production of an important element of respiration. The American Indian, with his present habits of living solely on flesh, could not with any comfort use tea as an article of food; for his tissues waste with such rapidity that, on the contrary, he has to take something to retard this waste. And it is worthy of remark, that he has discovered in tobacco smoke a means of retarding the change of matter in the tissues of his body, and thereby of making hunger more endurable. Nor can he withstand the captivation of brandy, which, acting as an element of respiration, puts a stop to the change of matter, by performing the function which properly belongs to the products of the metamorphosed tissues. The third part of Prof. Liebig's Report treats of the recondite laws of the phenomena of motion. As it is principally of a speculative character, we can pass this over. The Professor concludes his communication by two chapters: one on the theory of disease; the other on the theory of respiration. The whole life of animals consists of a conflict between chemical forces and the vital powers. In the normal state of the body of an adult, both stand in equilibrium. Every mechanical or chemical agency which disturbs the restoration of this equilibrium is a cause of disease. Disease occurs when the resistance offered by the vital force is weaker than the acting cause of disturbance. Death is that condition in which chemical or mechanical powers gain the ascendancy, and all resistance on the part of the vital force ceases. Every abnormal condition of supply or

waste may be called disease. It is evident that one and the same cause of disease—that is, of disturbance—will have different effects, according to the period of life. A cause of disease, added to the cause of waste, may in old age annihilate the resistance of the vital powers, or, in other words, occasion death; while, in the adult state, it may produce only a disproportion between supply and waste; and in infancy only an abstract state of health, i.e., an equilibrium between supply and waste. Prof. Liebig argues, from what has preceded, that a deficiency of resistance in a living part to the cause of waste, is in fact a deficiency of resistance to the action of the oxygen of the atmosphere. The Professor's theory may be compared to a self-regulating steam-engine. The body, in regard to the production of heat and of force, acts just like one of those machines. With the lowering of the external temperature, the respiration becomes deeper and more frequent; oxygen is supplied in greater quantity, and of greater density; the change of matter is increased, and more food must be supplied, if the temperature of the body is to remain unchanged. It has been proved, that iron is not necessary to the colouring matter of the blood, but that it forms an essential constituent of blood globules. These globules, it is well known, take no part in nutrition. Prof. Liebig conceives, that the iron is the great means of conveying to the lungs the carbonic acid formed in the system; and he has made a calculation, that the iron contained in the body could actually convey twice as much carbonic acid as is expelled daily from the system.

Mr. SOLLY read a paper by Prof. Schönbein, 'On the Electrolyzing power of a Simple Voltaic Circle,' showing that voltaic effects may be produced without the solution of a metal, the usual source of voltaic actions, but by nitric and various other acids.

Mr. WILLIAM BLYTH read a paper 'On the Manufacture of Sulphuric Acid.'

In SECTION C. (*Geology and Physical Geography*) a paper was read 'On the Physical Structure of the Appalachian Chain, as exemplifying the laws which have regulated the elevation of great Mountain Chains generally,' by Professors H. D. Rogers, and W. B. Rogers. And another, 'On the Structure and Mode of Formation of Glaciers,' by James Stark, M.D.

In SECTION D. (*Zoology and Botany*) a Report was read 'On the present state of the Ichthyology of New Zealand,' by John Richardson, M.D.

Mr. BAEINGTON presented the Report of the Committee for the preservation of Animal and Vegetable Substances.—A number of simple solutions of different salts had been tried, but, except the sub-carbonate of potash, they all failed to preserve the specimens for any length of time. Substances in solutions of one part of naphtha to seven of water were in good preservation. Kreosote is a good preservative, but it stains the specimens brown. Bichloride of mercury preserves well, but hardens specimens too much. Vegetable specimens were well preserved in oxalic acid, concentrated nitric acid, naphtha, and kreosote.

Mr. MOORE had used Goadbey's solution for the preservation of substances, and found it answer better than spirit.—Dr. RICHARDSON had used Goadbey's solution, but did not find it answer. A cheap medium for the preservation of animal substances was still a desideratum: at present, spirit he believed best.—Dr. LANKESTER stated that he had specimens of animal substances preserved by injecting the veins and arteries with arseniate of potash and bichloride of mercury, and the whole immersed in a strong solution of common salt. This plan was pursued by Dr. Lizars, of Edinburgh, and enabled students to pursue the most delicate dissections years after the death of the subject.

Mr. MOORE (of Manchester) exhibited specimens of parasites found on the salmon in fresh and sea water, differing much in structure. The freshwater parasite left the animal as soon as it arrived at the sea, but the parasite of the salt water remained on the animal a long time after it reached the river. Specimens of the *Argulus foliaceus* were also exhibited, which attacked the carp in

the ponds of Manchester: the gold and silver carp, however, were quite free from their presence. He suggested that the presence of the parasites on salmon might be a cause of their migration.

Dr. RICHARDSON read a description of a new genus of fishes called *Machærium subducens*. The specimen came from Port Essington, in New Holland, and nearly resembled the *Echiodon Drummondii*, lately discovered in the Irish seas, by Mr. Thomson.

Mr. WEBB HALL exhibited a specimen of the nest of a wasp, found attached to a twig within a deserted bee-hive, and about the size of a pigeon's egg.

In SECTION F. (*Statistics*) Mr. NOBLE read a paper 'On the influence of the Factory System in the development of Pulmonary Consumption.' According to the census of 1831 there were 49,932 families resident in Manchester and Salford; the entire registered deaths in 1839 were 9,223, and the cases of consumption 1,454, that is, 1 death from consumption out of every 34 families, and 3 from consumption in every 19 deaths from all causes. In agricultural Essex, with a population of 62,403 families, the deaths from consumption in 1839 were 1,201, and the total number of deaths 6,352; being, in the agricultural district, 4 in every 21, and in the factory district but as 3 in 19. In the district embracing Cambridgeshire, Huntingdonshire, and the southern divisions of Lincolnshire, comprising a population of 67,351 families, the deaths from all causes were 7,306, and those from consumption 1,308, or nearly 1 death in every 5. Thus the general mortality was lower in the agricultural districts, but the proportion of consumptive cases to deaths was greater. In Liverpool, out of 43,026 families, the deaths for 1839 were 9,181, and the deaths from consumption 1,742. Thus in Liverpool there are 2 deaths from consumption out of every 49 families, and in Manchester only two out of every 68. In Birmingham the condition was more favourable, being nearly one death from consumption out of every 36 families. In London the rate is two deaths from consumption out of every 105 families, and the proportion of consumptive cases to deaths from every cause exactly the same as Manchester, or 3 out of 19. With the exception of the metropolis, Manchester has fewer consumptive cases, in proportion to the number of deaths from every cause than any of the districts above mentioned; and hence Mr. Noble inferred that factory labour has no direct tendency to produce consumptive disease. Taking the register of deaths for the three years in the township of Manchester between the ages of fifteen and forty, the following results were obtained: 174 consumptive deaths were of persons employed in factories, 590 of persons registered in various occupations, and 377 without any stated employment. Of the factory operatives 45 were spinners, 49 winders, 28 piecers, 15 reelers, 11 carders and frame-tenders each, and 10 stated generally to be employed in factories. The general conclusion from these and similar facts was, that factories have no special influence in producing scrofulous disease, or its peculiar manifestation, consumption.

LORD FRANCIS EGERTON delivered a very elegant address at the General Meeting. The following marked tribute of admiration to a distinguished and distinguishing member of our own "order" will be unacceptable to few of our readers:—

"With reference to the past transactions of the Society, it would be a presumption in me to enter upon any detail. I confess, however, that on looking over the printed Transactions of the year 1839, my eye was caught by a paragraph of the introduction to Professor Owen's treatise on the fossil reptiles of Great Britain, in which he avows that but for the assistance of the Association he should have shrunk from the undertaking of that work. The context to this passage is a vast one. Those who wish to feel the entire force of the commentary it conveys, must follow it through the pages of subtle disquisition which succeed it. I ask you, learned and unlearned alike, to give but a glance at those pages. See how the greatest—I am I wrong in calling him so?—of the British disciples of Cuvier walks among the shattered rem-

nants of former worlds, with order and arrangement in his train. Mark how, page after page, and specimen after specimen, the dislocated vertebræ fall into their places,—how the giants of former days assume their due lineaments and proportions, some shorn of the undue dimensions ascribed to them on the first flush of discovery, others expanded into even greater bulk, all alike bearing the indelible mark of adaptation to the modes of their forgotten existence, and pregnant with the proofs of wisdom and omnipotence in their common Creator."

CASE OF FUNGUS HÆMATODES OF THE EYE.

CHARLOTTE MARLOW, æt. 15, admitted under the care of Mr. Babington, December 8, 1841. (Princess Ward.) She stated that four years ago the power of vision began to diminish in the left eye, and, on examination, she discovered a white substance through the pupil; this opacity was the first thing noticed. The white body gradually came more forward, and occupied the whole of the anterior chamber; during its progress the whiteness changed to a yellowish colour. The next thing observed was the presence of minute yellow lumps, about the size of a pin's head, in the cornea; of these one was red and vascular; none, however, were observed to arise from the sclerotic. These miliary bodies "grew" from the cornea, and extended pretty uniformly over the ball, producing in their growth no irritation or profuse lachrymation. For two years their increase was almost imperceptible, but about this time they began noticeably to increase. The pain which accompanied them in their progress was constant, and usually more severe towards the evening, it being confined to the affected eye-ball and the brow above. Medicines, which were given from time to time, relieved this in some measure. Three months since one of the larger tubercles became sore at the top, and discharged some matter. Before this the individual tubercles had coalesced, and formed one mass. Three weeks since the morbid growth, hitherto confined and covered in by the lids, protruded through them, and matter freely exuded from its ulcerated surface. She cannot remember ever to have received a blow prior to the first appearance of the white substance. At different times she has been attended by the first oculists, Morgan, Tyrrell, Mackenzie, Ware, &c. Their treatment consisted in the application of leeches and medicines internally, few applications being applied to the eye itself. Before protruding through the lids, the surface of the growth was always kept moist by the lachrymal secretion; but since this it becomes dry, especially at night, when pain is principally felt. Some bleeding was occasionally observed from it. On exposing the globe by raising the upper lid, the conjunctiva appears highly vascular, and a few vessels larger than the rest appear to shoot into and become lost in the fungous mass. On passing the finger over the lower lid a round nob is felt, and on exposing this it is found greatly injected: this tumour has attained its present size within the last four months. The fungus itself is of a circular form, and presents an irregular granular appearance, with concrete matter on its surface. There is an enlarged gland at the anterior part of the ear, and several under the angle of the jaw; the former has been in existence about three weeks, whilst the latter has been enlarged four months. Some pain is experienced in them, if roughly handled; without this, they are of no inconvenience to her. She has never been in good health, and cannot take much exercise without fatigue.

11. Some oozing of blood has taken place from the eye within the last 24 hours. Glands

in the neck much the same. No pain in the brow last night. She is to apply cold and wet rags to the part.

12. No bleeding. The eye has been painful this morning.

13. Much the same. The submaxillary glands painful. No bleeding. One part of the fungus appears somewhat darker, and it discharges very freely, the discharge causing some irritation where it lodges on the cheek.

14. At a consultation with Mr. Keate, Mr. Hawkins, and Mr. Walker, the practicability of the operation was decided.

16. The following operation was performed. The patient, seated in a chair, had a sheet placed round her so as to confine her arms; a needle with a double silken ligature was then passed through the centre of the diseased organ, for the purpose of fixing the ball, and directing it upwards or downwards, as required. The external commissure of the lids was next divided by a scalpal for the length of about a quarter of an inch, to paralyse the orbicularis, and give more room for the operation. The next incision was through the reflected conjunctiva, above and below, so as to expose the upper and lower surface of the ball more completely. A blunt-pointed bistoury was now used to detach the globe from the fat and cellular tissue in the socket; the ball being drawn upwards or downwards as required, by means of the thread. When the globe was completely separated from its attachments, a pair of curved scissors were passed into the socket, and the optic nerve divided. The finger was now passed round the socket to ascertain if any more diseased structure remained. A further portion of the nerve appearing diseased, this was first seized by an Assaline's forceps, and removed by the scissors. Some slight bleeding took place during the operation, but ceased as soon as the socket became filled with coagulum. The slight incision at the external angle was brought together by a suture. The patient bore the operation with almost unexampled firmness, and from first to last did not show any signs of impatience. Wetted lint was placed over the eye, and this was ordered to be kept constantly applied.

An hour after the operation, she felt some degree feverish. 9 P.M. Has dosed frequently since; is composed and tranquil; there has been no hæmorrhage. The wetted lint has been constantly applied.

17. The pain in the wound kept her awake, as also some in the brow. The following medicines were prescribed to allay pain and procure sleep.

Liquoris ammon. acet. ʒij.

Misturæ camph. ʒiiss.

Morph. acet. ʒgr. hac nocte:

On account of feverishness.—

Hanustus ammon. acet. q̄tis horis sum.

18. Slept somewhat better. The lids look somewhat redder than usual. Pulse quick, 90. Skin without any unusual degree of heat. Glands less painful; bowels confined.

Pil. Colocynth co. gr. v. statim.

19. Her bowels have been opened for the first time since the operation. No soreness in the eye. Some slight headache, which she thinks is caused by confinement in bed, never having been used to it. She has been on low diet since the operation. Skin moist; pulse natural.

20. The suture came away. There is some discharge from the eye to-day. She wishes to get up, feeling in every respect pretty well; a light poultice of bread-and-water to be applied instead of the water dressing.

21. She is to have the ordinary diet.

22. In every respect doing extremely well. The poultice exchanged to-day for simple dressing, which is to be removed twice a-day, the discharge being free. Lower margin of upper lid of darkish colour. Tongue moist, skin cool; bowels open; pulse natural; no pain at all in the eye; glands in much the same state.

23. Going on well.

Pil. hydrag. gr. vj.

Hac nocte et cras mane.

24. The pain in the head is less towards evening. Eye, or rather the granulations springing up in the socket, discharging freely. To be dressed three times a-day, to prevent any accumulation of discharge on the cheek.

27. She has been up for some days past, and is regaining her usual colour and strength. Free discharge from the socket; no pain anywhere; glands have now decidedly diminished in size, both at the ear and angle of the jaw.

Dec. 30. She has left off all applications, and only wears a shade. A slight quantity of serum exudes.

Jan. 1. Much the same. No discharge.

5. She has continued improving, and is so well as to be able to leave the hospital to-day. The gland at the anterior part of the ear is decidedly smaller than when she came in, although still unusually hard. At the angle of the jaw the glands remain hard and lobulated, without any pain now on pressure. There are no paroxysms of pain at night, nor any symptoms of cerebral affection. Up to this time, therefore, the operation has been attended with success, inasmuch as the removal of the source of discharge has prevented the irritation which its pressure would have caused to the surrounding parts. The unsightly appearance of the tumour is replaced by the much less one of permanent closure of the lid. It has done more; the absorption of the discharge caused the glands to inflame; and these, if subjected much longer to its presence, would, perhaps, have taken on the same malignant character, since it is invariably observed, that glands, under similar circumstances, take on the specific action of the original disease.

ADDENDA.

On making a vertical section of the removed globe, the disease appeared to originate in the retina, or else immediately external to it, in some parts being thicker than in others, presenting tumours, as it were, bulging into the former situation of the vitreous humour. The sclerotic, as far as could be seen, seemed to be unimplicated. In the anterior part, apparently the situation of the lens, a small quantity of earthy particles were deposited, mixed with a black fluid. The cornea, iris, and other textures, were of course totally destroyed; several large varicose and tortuous vessels, those before mentioned as being seen on the conjunctival surface, were more distinctly visible running over the tumours.

A gentleman informed me that this patient, whilst attending at the Moorfields Ophthalmic Hospital, was treated by small doses of the hydrag. c. creta, the disease making very slow progress under its exhibition. The bright-coloured spot of an orange colour was, as is usual in the incipient stage of this complaint, seen in the early part of the disorder.

The preparation is, I have since ascertained, placed in the Museum.

May, 1842. Mr. Babington informs me that the poor child has become blind with the other eye, from the optic nerve becoming more and more diseased; she also has violent pain in the head; the glands remain in much the same state, at times becoming inflamed.

June 27. The patient died at her residence,

MEDICAL NEWS.

MEDICAL CHARTERS (Tuesday).—Lord J. Russell wished to ask the Right Honourable Baronet the Secretary of the Home Department if he intended to introduce a Bill in the course of the present session with respect to the College of Physicians and the College of Surgeons? He wished to know whether the Right Hon. Gentleman intended to introduce a Bill with respect to the charter of these two colleges, and supposing that Bill altered these charters, if it was the intention of the Right Hon. Baronet that the Bill should come into operation before Parliament met again?—Sir J. Graham said it was his intention, as he had before stated, in answer to a similar question to bring before the House a Bill authorising her Majesty to grant a new charter to the College of Physicians. It was also his intention to advise the granting of a new charter to the College of Surgeons, and these two charters would certainly, if granted, be in operation before the next meeting of Parliament. — Lord Sandon wished to know if power would be given under these charters to grant degrees.—Sir J. Graham said it was not intended that such authority should be given, because that authority was not wanted. Her Majesty could grant that power.—Lord J. Russell wished to know what change would be made in the present charter?—Sir J. Graham would be prepared to state to the House the details, when he introduced the Bill.—Mr. Ewart would ask the Right Hon. Gentleman whether the charter proposed would exempt the institution from the effect of the Medical Reform Bill, and whether they would be exempt from the effects of the Medical Reform Bill to be introduced next session?—Sir J. Graham said he must give the same answer as to the Noble Lord. He should move for leave to bring in the Bill, and then it would be his duty to state to the House what the precise provisions of the Bill were.—Mr. O'Connell wished to know if the charter would affect the College of Physicians and College of Surgeons in Ireland?—Sir J. Graham said it was not necessary to introduce the proposed alterations in the Irish Colleges of Surgeons and Physicians.

Mr. William Crozier, of Oxford, the first gentleman who obtained the studentship in Human and Comparative Anatomy, founded by the Royal College of Surgeons, London, has just received the appointment of Assistant Surgeon, in the Hon. E. I. C. Service. It may not be generally known that the Army, Navy, and E. I. C. authorities have, with great liberality, placed at the disposal of the College an appointment in each service once in three years.

LAW.—Dr. Little, of Finsbury Square, brought an action against a Mr. Oldaker, and on June 30 got a verdict, the Judge (Lord Denman) declaring that the holding of a Physician's diploma did not disentitle the plaintiff to recover compensation for services rendered as a surgeon. In the case *Lipscombe v. Holmes*, (2 Camb. 2, p. 441,) Lord Ellenborough gave a contrary decision. This case should not be much relied on. It seems probable that Dr. Little received the Physicians' diploma after the surgical attendance, and at any rate Lord Denman's law is rated less highly by the Bar than his judicial dignity.

HARVEIAN SOCIETY.—The Prize Essay this year will be 'On the Properties of the Urine, and its Morbid States in Venous Diseases unconnected with Granular Degeneration of the Kidney.' The essays must be sent before 1st January, 1843. The prize is an elegant silver medal.

On the other hand, if there is positive destruction of nervous substance, with loss of continuity of the principal trunk of the nerve, it will alter the chances very materially. However, as this cannot be positively known without trial, and as the extraordinary power we possess of rousing nervous energy may be sufficient to enable the functions to be restored with a state of nerve which could not be of service under any other agency, I should decidedly give it as my opinion that it ought to be tried, as no risk can attach to the trial; and a week or two at most will be all the time required for giving it a fair trial." In accordance with this advice the patient called on me last Tuesday evening, when she could only speak in a low whisper, as already named. I hypnotised her for a few minutes, but without improvement; again next day and on Thursday and Friday twice, but still unable to speak; after carrying it a little farther on Saturday she could speak pretty well, and by next evening as well as at any period of her life.

Same day, a gentleman 65 years of age, who had for a year and a half been blind of right eye and weak in right leg and arm, supervening on a paralytic seizure, consulted me. He could not discern a lighted candle with the right eye. In the presence of his surgeon, his daughter, and two very intelligent friends, who came along with him, he was hypnotised for eight minutes, and when aroused he could not only see light, but discern my fingers with the right eye, could see much better with the left than before the operation, and felt much stronger in his arm and leg. He has been with me again yesterday and to-day, and is still better.

Neither of these patients had this operation carried beyond the first degree, and were quite conscious all the while.

I would ask, is such an agency as this unsuitable for professional investigation? I am sure you will be liberal enough to think otherwise, and by recording these cases, which have occurred since my conversazione to the members of the British Association, who honoured me with their company last Wednesday, you will much oblige me.

I shall send you some additional cases shortly, in the hope that they may induce others to follow out this interesting inquiry, and aid in working out the difficult problem of the *modus operandi* by which the effects are produced.—I am, Sir, your most obedient,

JAMES BRAID.

3, St. Peter's Square,
July. 4, 1842.

DR. MOORE AND MR. HAWKINS.

To the Editor of the 'Medical Times.'

SIR,—Allow me to correct a mistake in the letter of your good and glowing correspondent "Humble Enquirer."

The worthy, ingenious, and modest inventor of the cranial compasses, Mr. Hawkins, did not oppose the introduction of Mesmerism. Your correspondent mistook Dr. Moore for him; it was Dr. Moore that so forgot himself, and was so promptly silenced by Dr. Elliotson. I am happy to add that not one of the wretched *clique* who so distinguished themselves by their ignorant and unworthy opposition was reelected upon the committee of the Association.—Your obedient servant,

ONWARDS.

HYDROPHOBIA.—Dr. Fouilhoux, of the Hôtel Dieu, has lately employed with success the Mexican plant *Cavadella*, in a case of hydrophobia which appeared hopeless. He administered to the patient 19 drachms, and had the satisfaction of seeing him gradually improve. He shortly after left the hospital perfectly cured.

just six months after the operation, the remaining portion of the optic nerve having become ulcerated. The symptoms under which she laboured previously to her decease, were total blindness, pain over the left brow, together with sickness and diarrhoea, probably from sympathy.

The optic nerve, for a little distance, was soft and pulpy, before arriving at a tumour of some size, which extended as far as the decussation of the optic nerves. It was the presence of this tumour which caused the obstruction to vision in the other eye. The glands were in a state of suppuration, although they had not burst externally.

Having watched this case and its fatal termination, we must consider whether, under similar circumstances, it would be justifiable to have recourse to this procedure? The fact, that no bad symptom followed the operation; that the patient's mind was relieved from the anxiety and pain incidental to an open fungous mass; that the health decidedly improved for some time after its removal, whilst the patient could go amongst her friends with confidence and without disgust, would incline to the practice of removal. But this case only adds another proof to the ultimate inefficaciousness of removal; the disease, in every case, seems to return; and it is a question, therefore, to be decided by the patient, or the patient's friends, if they are anxious to give the practice a trial after the true state of the case has been pointed out: we may operate, but we should not insist upon the practice as the only means by which the patient can be saved.

NEURO-HYPNOTISM.

To the Editor of the 'Medical Times'

SIR,—I send you a copy of the 'Manchester Times,' containing a pretty correct and full report of proceedings of the Medical Section of the British Association in reference to an essay I offered to read to them, on the curative agency of neuro-hypnotism, as I practise it. I offered to produce patients, whose cases were referred to, that they might have an opportunity of judging facts for themselves, free from all partiality, or bias of me, as an operator. They were pleased to reject the essay as unsuitable, although many of the cases referred to had been speedily cured by this agency, after resisting the best endeavours of what I have no doubt, on the old plan, was orthodox treatment, by the very gentlemen who pronounced the paper explaining this new and successful mode, as unsuitable for their consideration. As I know you are liberal enough to encourage and foster new and particularly useful discoveries, I beg briefly to state to the profession generally, through your pages, two cases which occurred to me last Saturday.

A middle-aged lady had a severe catarrhal affection in January 1838. In ten or twelve days after this attack she entirely lost her voice, so that she could only speak in a whisper, or occasionally in a scream, ever since. She had undergone most judicious treatment, under able medical men, including one of our most distinguished London surgeons. The treatment had embraced galvanism and electro-magnetism. Some time ago she consulted me by letter, being desirous of not undertaking so long a journey unless with the prospect of benefit, and by this time she had given up all hopes of a cure. My answer was this:—"If, as seems to be the opinion of most of the professional gentlemen consulted, your loss of voice is owing to exhaustion of the nervous energy of the vocal nerves, and not from positive destruction of any portion of them, I consider my mode of operating likely to be very speedily successful."

A TABLE OF MORTALITY FOR THE METROPOLIS,

Showing the number of Deaths from all causes registered in the four weeks ending June 25, 1842.

	June 4	11	18	25
Small-Pox	3	5	10	7
Measles	27	41	33	27
Scarlatina	25	30	16	24
Hooping-Cough	36	20	28	20
Croup	6	12	8	4
Thrush	2	2	4	6
Diarrhoea	2	..	11	8
Dysentery .. .. .	..	..	..	1
Cholera .. .. .	..	1	2	1
Influenza	3	..	..	1
Typhus	16	21	23	20
Erysipelas	7	4	1	7
Syphilis	1	2	..	..
Hydrophobia .. .. .	..	..	..	..
Diseases of the Brain, Nerves, and Senses ..	129	151	133	109
Diseases of the Lungs, and Organs of Respiration ..	220	235	232	234
Diseases of the Heart and Blood-vessels	18	18	14	19
Diseases of the Stomach, Liver, &c.	50	49	48	67
Diseases of the Kidneys, &c. ..	6	6	4	5
Childbed	5	4	5	10
Ovarian Dropsy .. .. .	..	..	..	..
Disease of Uterus, &c. ..	4	3	2	4
Rheumatism	1	..	3	1
Diseases of Joints, &c. ..	1	8	7	1
Ulcer .. .. .	..	..	..	2
Fistula	1	..	1	..
Diseases of Skin, &c. ..	..	1	1	1
Diseases of Uncertain Seat ..	108	129	98	93
Old Age or Natural Decay ..	68	67	50	36
Violence, Privation, or Intemperance	20	30	26	32
Causes not specified	1	4	2	2
Deaths from all Causes ..	760	847	752	742

MEETINGS FOR THE ENSUING WEEK.

MON. 11. Botanic Gardens, Chelsea, 9 a.m.
 TUES. 12. British Museum, Natural History, 10 a.m. to 4 p.m.
 — Zoological Society, half-past 8 p.m.
 WED. 13. Botanic Gardens, Regent's Park, 4 p.m.
 THU. 14. British Museum, Natural History, 10 a.m. to 4 p.m.
 FRID. 15. Botanic Gardens, Chelsea, 9 a.m.

OBITUARY.—We regret to announce the death of the celebrated Antonio Piccioli, the Conservator of the Botanical Department of the Museum of Natural History of Florence. M. Piccioli was an excellent botanist, and a very talented individual, as his various works amply prove.

ADVERTISEMENTS.

SLEEP AT WILL.

In a few days will be published, price 10s. 6d.,

THE ANATOMY OF SLEEP; or, the Art of procuring Sound and Refreshing Slumber at Will. By Dr. BIRNS, Fellow of the Society of Antiquaries of Scotland, &c.

The subjects treated of in this Work are, Life—The Brain—The Physiology of Sleep—Hibernation—The Sleep of Plants—Organization—Asphyxia—Trance—Catalepsy—Hallucination—Ecstasy (with two remarkable cases illustrative of this condition of the body, by the Earl of Shrewsbury)—Dreams—Somnambulism—Mesmerism—Sleeplessness—Means of Procuring Sleep at Will, &c.

The above is the first attempt by any medical writer to reduce the phenomena of Sleep to a system, by directing the activity of the cerebral organs. The anatomy of Sleep, therefore, will be found interesting, not only to the profession, but to the public at large, for whom it is more especially intended. Another circumstance, which in the eyes of many will render the work a literary curiosity is the fact, that it is entirely set up by the new patent composing machine of Messrs Young and Delcambre. A very small number, but five hundred copies are being struck off, consequently a very early application will be necessary to secure a copy. The work is illustrated by the new process of anaglyphy, invented by L. C. Schomberg, Esq., and will contain upwards of three hundred pages.

For the present, orders, directed to the Author, will be received only at the Office of the Medical Times, Wellington-street North, Strand.

ROYAL HUMANE SOCIETY.—The Committee

of this Society, with a view to perfect their methods of treatment, and desirous of holding out an inducement to medical men to pursue this beneficial branch of medical science, offer a prize gold medal, or thirty guineas, for the best, and a silver medal, or fifteen guineas, for the second best, MEDICAL ESSAY on the subject of SUSPENDED ANIMATION, and the best means of restoring life, as well as the best and most approved apparatus to be used for that purpose. The points to be especially embraced by this Essay must be as follow, viz:—

To determine the physiological phenomena which occur in cases of death from drowning, strangulation, the respiration of gases which are unfit for the maintenance of life, lightning, and exposure to intense cold; and to explain the medical and surgical treatment which should be employed for the recovery of persons who are in danger of perishing from any of the above-mentioned causes.

Each essay offered for this prize must be delivered to the Secretary, at the Society's Office, 3, Trafalgar-square, Charing-cross, on or before the 30th of November, 1842; with it must be presented a sealed packet, with a motto on the outside, and within the author's name, with the same motto.

No paper in the handwriting of the author, or with his name affixed, will be received, and no candidate must, directly or indirectly, reveal himself to any member of the committee, or to the Secretary.

The essay of the respective candidates (the successful ones excepted) will be returned if requested.

April, 1842.

BERKLEY WESTROFF, Secretary.

MEDICAL PRACTICE.—For DISPOSAL, a GENTLE PRACTICE, in a very eligible Neighbourhood, within 20 miles of London, and near a Railway Station; with the Lease of a moderately rented house. Together with the Furniture and Fixtures. A Purchaser must command £700.

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MR. WEST HAS PUBLISHED THE FOLLOWING:

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2. AN ANATOMICAL DIAGRAM OF THE HUMAN EYE; in which all the internal structures of the eye are accurately developed. Price 2s. coloured.

3. WEST'S MODEL OF THE EYE, to illustrate the Theory of Vision, and show the Use of Spectacles. With Apparatus, Case, and full Printed Description, 16s. 6d. to 21s.

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ORFILA'S LECTURES ON ARSENIC.

Containing an Account of the different Operations Performed upon the Body of Laffarge.
Collected and Translated by JOHN DAI. PIAZ, Pharmacien, and Laureate of the School of Paris.

LECTURE I.

GENTLEMEN,—Arsenic is chiefly found in the earth, under the four following states:—

First, Native arsenic, which usually occurs in rounded masses, or nodules of a foliated lamellar texture.

Secondly, In the state of an oxide, but only so far oxydised as to constitute arsenious acid, represented by As_2O_3 .

Thirdly, Associated with other bodies, as sulphur, iron, antimony, copper, lead, cobalt, &c.

Fourthly, In a saline state, as arseniate of lime, of cobalt, of nickel, of iron, &c.

The physical properties of this metal are the following:—When recently prepared,* it is extremely brilliant, of a steel-blue colour, of a granulated texture, and very brittle; it possesses neither taste nor smell, provided it has not been previously subject to friction; in that case it requires a peculiar characteristic smell, which, I beg to observe, cannot in the least be compared to that of garlic.

The specific gravity of arsenic is 5.189, water being taken as the unity. It readily volatilises without entering into a state of fusion, and in closed vessels may be distilled as soon as the mass acquires a red heat; exposed, it acquires a heat of 180 deg. (356 deg. Fah.) It is necessary I should well impress upon your minds this last characteristic property; the low temperature at which it volatilises should be particularly noted, for it is not long since that certain persons, and among whom I may mention Monsieur Raspail, who, in a pamphlet published by him relating to the Tallet affair, stated that antimony may be volatilised under the same condition as arsenic, and that the above-mentioned characteristic should be said to belong to arsenic alone.

To make such an assertion is quite absurd, for antimony, when subject to the same heat, and under the above-mentioned conditions, is not in the least degree affected in any way.

Action of Oxygen, or Atmospheric Air.—Arsenic, when heated in either of these gases, burns with a blue flame, producing at the same time copious white fumes of arsenious acid. It may be observed, that never, under similar conditions, can any other compound of arsenic and oxygen be formed. If, instead of assisting the action of oxygen by heat, metallic arsenic be exposed to damp oxygen, or to a damp atmosphere, a different result occurs. After a short time, the surface of the metal becomes tarnished; and if, at the same

* As it is never found in a state of purity, its characteristic properties can only be studied by obtaining the metal by artificial means.

† The town where Madame Laffarge's trial took place.

time, the metal is in sufficient quantity, so much heat is produced as would ignite any combustible body with which it may be in contact: for instance, cases have occurred when the containing vessel has been entirely consumed.†

According to Berzelius, a real oxide is produced in this instance, which he terms the black oxide, or the protoxide, in the proportion of 92.6 metal, and 7.4 oxygen. Another authority deserving attention, M. Pronst, does not consider this combination as a real oxide; he asserts, on the contrary, that this compound is a mixture of arsenious acid with the metal.

To prove this assertion, Pronst observes that this black compound, when heated, emits arsenious acid and metallic arsenic at the same time. I cannot say which of these two eminent authorities ought to prevail. Supposing, with Berzelius, that this oxide is really a protoxide, I think it might well occur that arsenious acid should be produced at the expense of the oxygen of this compound, thereby isolating a certain quantity of the metal.

Action of Hydrogen.—This gas combines with arsenic in two proportions, to form two very unlike compounds; the first is solid, and is known under the name of hydride of arsenic; the second is gaseous at the mean temperature and pressure of the atmosphere, and is generally known as arsenuretted hydrogen.

The hydride of arsenic may be obtained by either of the two following methods:—

First, by the combustion of arsenuretted hydrogen; and *secondly*, by the action of an amalgam of potassium and arsenic upon water. In this latter case the water is decomposed,* and there is formed a solid brown substance which is insoluble in cold water. This is the hydride of arsenic, which must be collected, washed, and dried.

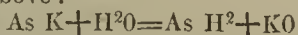
I have just stated this hydride to be insoluble in cold water; the case is very different when it is subjected to the action of boiling water. In this instance, arsenious acid is produced, and arsenuretted hydrogen evolved at the same time.†

Arsenuretted Hydrogen.—Under ordinary circumstances, it is a transparent and colourless gas, possessing a most offensive smell, and when inhaled, has a most deleterious effect upon the animal economy. Its density is 2.6949; it is easily decomposed by caloré and electricity, giving rise to hydrogen and metallic arsenic.

When exposed to a temperature, 30 deg. Cent.

† This effect has been observed more than once when large quantities of metallic arsenic have been packed in barrels, and kept in damp places.

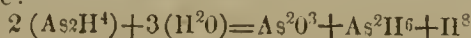
* Its oxygen unites with the potassium to form potash, and the nascent hydrogen combines with the arsenic. The following formula is an illustration of the above:—



† It is more likely to be a mixture of the arsenuretted gas with pure hydrogen. In this case, the theory of the reaction can easily be explained in the following manner:—

The composition of hydride of arsenic is one proportion of the metal with two proportions of hydrogen; consequently, it may be represented by As^2H^4 ; but we know water may be represented by H^2O , arsenuretted hydrogen by As^2H^6 , and arsenious acid by As^2O^3 . Therefore, it is clear that two proportions of the hydride decompose three of water: all the oxygen unites with one-half of the metallic arsenic to form arsenious acid, whilst the other half, finding all the hydrogen of the water plus that of the decomposed hydride, combines with the necessary quantity to form arsenuretted hydrogen, which escapes, mixed with the pure hydrogen in excess.

The following formula is an illustration of the above:—



(22 Fah.) this gas becomes liquid, and, like other non-permanent gases, will remain in this condition when subjected to an increase of temperature, provided it be subjected to a pressure sufficient to counterbalance the expansive power produced by the increase of temperature.

Arsenuretted hydrogen, when sufficiently heated in oxygen or atmospheric air, burns with a blue flame; its hydrogen combines with the oxygen to form water, at the same time a small quantity of arsenious acid, and of hydride of arsenic is formed; but the greater part of the metal is deposited upon the sides of the vessel in which the combustion has been effected; or, as in the case with Marsh's apparatus, the metallic arsenic may be condensed upon a cold and polished surface.

Arsenuretted hydrogen is soluble in water; 100 volumes of this liquid, at the mean temperature and pressure, may be made to dissolve 20 volumes of this gas. It has been carefully and frequently analysed, the result of which states it as being constituted of one volume of the vapour of arsenic with three volumes of hydrogen, condensed into two volumes of arsenuretted hydrogen. It may, therefore, be represented by As^2H^6 .

Preparation of Arsenuretted Hydrogen.—This gas may easily be obtained by subjecting to the action of diluted sulphuric acid an amalgam of zinc and arsenic, or by introducing an oxygenated arsenical compound into Marsh's apparatus. In the first operation, the water is decomposed under the combined influence of the zinc and sulphuric acid; the oxygen unites with the zinc to form an oxide, which combines with the sulphuric acid to form sulphate of zinc. The hydrogen being in the nascent state, and from its powerful affinity for arsenic immediately combines with this metal to form arsenuretted hydrogen, which is expelled owing to its slight solubility, and to the high temperature of the liquid, produced by intense chemical action.*

In the second operation a different reaction takes place. In this case there is also a formation of sulphate of zinc, but the hydrogen liberated has a double action; one part combines with the oxygen of the oxydised arsenic to form water, whilst the other part combines with the nascent arsenic to form arsenuretted hydrogen.†

Action of Boron, Carbon, and Azote.—These elementary bodies are without action upon arsenic.

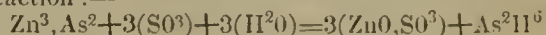
Action of Phosphorus.—It combines with arsenic to form a phosphoret, which offers but little interest.

Action of Iodine.—An iodide of arsenic may be obtained by heating the metal with an excess of iodine. It is of a deep red colour, and very volatile. From a correct analysis of this compound, it is found to be constituted of ten parts of arsenic with fifty parts of iodine. Iodide of arsenic has been prescribed, by medical practitioners, in cases of lepra, and of cancer of the breast.

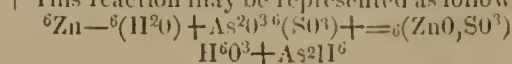
Action of Chlorine.—If finely-powdered arsenic be thrown into a vessel containing chlorine, instant combustion takes place with the production of dense white fumes of chloride of arsenic, forming, when condensed, a deliquescent compound. By a similar process a compound of bromine and arsenic may be obtained; but as it has been very little studied, it deserves only to be mentioned *en passant*.

Action of Sulphur.—There are three well-determined compounds of sulphur and arsenic; two others have been admitted by M. Berzelius, but as they have not been generally accepted, I shall speak only of the first three.

* The following formula is an illustration of this reaction:—



† This reaction may be represented as follows:—



§ The first of these, generally known under the name of *Realgar*, is a proto-sulphuret of arsenic. It is composed of 100 parts of the metal with 42.85 of sulphur.

The second compound of arsenic and sulphur is generally called *Orpiment*. It is a sesqui-sulphuret, composed of 100 parts of the metal with 64.27 of sulphur. In its composition, it is corresponding to arsenious acid, and may therefore be represented by As_2S_3 . The former sulphuret, containing one proportion less of sulphur, may be represented by As_2S_2 .

The third sulphuret resembles orpiment in colour, and is known only under the title of *Persulphuret of Arsenic*. Its composition is 100 parts of the metal with 106.91 of sulphur. It is proportioned, in combination, to arsenic acid, and may therefore be represented by As_2S_5 , arsenic acid being As_2O_5 .

Realgar.—It occurs native in China, Japan, Germany, &c., where it is generally found in large red masses of a conchoid texture: it is fusible and volatile; when heated in air, it produces sulphurous and arsenious acids, both of which are volatilised. When native, this proto-sulphuret, or realgar, is much used in painting. It is very little poisonous, since forty grains having been applied to a wound made in the thigh of a dog, eight inches high, produced death only after six days. That it is very little deleterious is proved by this additional fact, that the Chinese prepare with it a kind of cup, in which they macerate vinegar for the purpose of making it acquire purgative properties, the strength of which is in proportion to the length of time the vinegar is allowed to remain in the vessel.

Orpiment.—It is found, in commerce, in two different states—native and artificial. It occurs native in Hungary, China, Transylvania, &c. It is generally massive and lamellar, and of a bright lemon colour. It possesses neither taste nor smell; is less fusible than realgar; but, like it, is susceptible of producing sulphurous and arsenious acids, when heated in the open air. One or two drachms injected into the stomach of a large dog, produced death after thirty-six or forty-eight hours; the tissues of the digestive organs being more or less inflamed. From this we are enabled to conclude that the native orpiment is very little deleterious in comparison with that which is obtained by artificial means, and which I shall proceed to describe.

Artificial Orpiment may be either anhydrous or hydrated. The first is prepared, by manufacturers, by subliming a mixture of sulphur and arsenious acid, and is a very active poison; this is easily accounted for when we direct our attention to its composition.

Monsieur Guibourt,* who has strictly examined this substance, states it to be composed of 94 of arsenious acid, with only 6 of the sesqui-sulphuret of arsenic.

This readily explains the errors so many authors have committed when writing upon this substance, and the contradictory statements found in many of the medical works upon the toxic effects produced by this compound; the various authors having made use of both the native and artificial orpiment, without regarding their difference in composition. Why, it is quite certain, if one administers to one individual half a drachm of native orpiment, and to another an equal quantity of the artificial, the effect upon each will be remarkably different; for, while the latter will be labouring under the influence of not less than twenty-eight grains of arsenious acid, the first will, in all probability, have evacuated the greater part of the pure sesqui-sulphuret very soon after its introduction into the digestive organs. Without doubt there would be produced a great derangement of the system, but not at all to be compared to the effect produced by twenty-eight grains of arsenious acid.

The *Hydrated Sesqui-sulphuret of Arsenic* is obtained by decomposing a solution of arsenious acid by means of sulphuretted hydrogen gas. As soon as this gas is brought in contact with the colourless solution, this immediately becomes yellow; but to obtain the sesqui-sulphuret in the shape of a precipitate, it is necessary to add an acid of

some kind: the precipitate may then be easily collected, and, when washed and dried, is fit for use.

When well prepared, this orpiment contains no arsenious acid; it is, therefore, less active than the anhydrous artificial, but more active than the native, from its being more minutely divided.

If we now look for the theory of this decomposition, we find that these compounds undergo a double decomposition: the oxygen of the arsenious acid combines with the hydrogen of the sulphuretted hydrogen gas to form water, whilst the metallic arsenic and the sulphur both being in a nascent state, combine to form sesqui-sulphuret of arsenic, which combines with a certain quantity of water, and thus becomes hydrated. The reaction may be explained as follows: three proportions of sulphuretted hydrogen are necessary to decompose one proportion of arsenious acid, all the hydrogen of the sulphuretted gas being exactly sufficient to form water with the three proportions of oxygen of the arsenious acid. Thus, $\text{As}_2\text{O}_3 + 3(\text{SH}^2) = \text{As}_2\text{S}_3 + 3(\text{H}^2\text{O})$.

From what I have just stated relating to the poisonous effects of these compounds, we may safely infer, that, when properly prepared, they are not very active; but are more or less deleterious in proportion to the quantity of any oxygenated arsenical compound they may contain.

There still remains something to be said concerning the hydrated sesqui-sulphuret, before we commence upon the per-sulphuret. When pure, the sesqui-sulphuret of arsenic is insoluble in water, but readily dissolves in ammonia, forming a colourless solution; if an acid be then added to it, the yellow precipitate will instantly reappear, which being collected, washed, and dried, may produce metallic arsenic if subjected to the action of charcoal, carbonate of potash, and heat. It is necessary this operation should be conducted with great care; the three substances, well dried, should be introduced into a small tube, closed at one end and drawn to a small orifice at the other. The mixture in the tube is then subjected to the heat of a spirit lamp, and the arsenical vapour becomes condensed in the slender part of the tube.

The theory of the reaction which takes place, is very easily explained as follows: the charcoal, or carbon, from its superior elective affinity, combines with the oxygen of the potassium to form oxide of carbon, which escapes with the carbonic acid of the carbonate of potash: the potassium thus eliminated combines with the sulphur of the sesqui-sulphuret of arsenic, and the freed metallic arsenic is volatilised and condensed in the extremity of the tube, which, on account of its being drawn to a small orifice, easily exhibits small quantities of the metal.

I must again repeat, that considerable care and attention is required in conducting this operation, or, what is better still, some degree of experience; for it sometimes happens that the tube explodes, as was the case with the chemists of Brives, during the Tulle affair. These gentlemen having submitted a loach † to the influence of a stream of sulphuretted hydrogen, obtained a yellow precipitate insoluble in water, soluble in ammonia, &c. This precipitate, when heated with charcoal and carbonate of potash, yielded metallic arsenic. They afterwards submitted a decoction of the stomach to a similar treatment attended with similar results, producing a yellow precipitate, which being mixed with charcoal and carbonate of potash, was then introduced into a glass tube, as before; unfortunately, this last experiment was not conducted with that care and attention as I have before stated to be requisite. The tube, after being exposed to the heat of a spirit-lamp, exploded; and the contents being lost, they nevertheless concluded that arsenic had been administered.

Now, I could not but blame them for having come to this conclusion; for I am able to assert, from experience, that there has been found in the stomach of certain individuals a substance very imperfectly known, but which possesses the singular property of forming a yellow precipitate when subjected to the action of sulphuretted hydrogen: moreover, this precipitate is insoluble in water, but

readily dissolves if ammonia be added, forming a colourless solution. It is true such a case seldom occurs; but as I have had the opportunity of observing one, and knowing a similar fact had been remarked by Mons. Chevalier, ‖ I did not for a moment hesitate to offer an opinion contrary to the decision of these gentlemen; accordingly, when Mons. Paillet § wrote to me, requesting to know whether (in the case already described, and when metallic arsenic had not been obtained from the stomach,) one might assert that arsenic had been administered. I immediately replied, by saying what they had done; and the results they had obtained were not sufficient to allow of their coming to such a conclusion.

And now, Gentlemen, I shall conclude what I have to say upon the sesqui-sulphuret of arsenic by making known to you how easy it is to distinguish the anhydrous artificial from the native sesqui-sulphuret, also to distinguish these two from the hydrated sesqui-sulphuret.

In the first place, we know, from the researches of Mons. Guibourt, that artificial anhydrous orpiment contains ninety-four per cent. of arsenious acid; and knowing this acid to be soluble in water, we should naturally boil the sulphuret in distilled water, and filter the decoction. A colourless solution is thus obtained, which may be tested by sulphuretted hydrogen, ammonia, charcoal, potash, &c. &c.; or else the solution may be submitted to the influence of Marsh's apparatus.

The hydrated sesqui-sulphuret, prepared in the way I have before mentioned, can always be distinguished from the anhydrous by the water it contains, and the absence of arsenious acid.

No sulphuret of arsenic can give out the metal by being introduced into Marsh's apparatus; the oxygenated compounds are alone capable of producing this result. Consequently, supposing a minimum quantity of a sulphuret was to be examined, let it be only the twentieth part of a grain, this quantity would be very difficult to detect with the ordinary reagents, sulphuretted hydrogen, charcoal, potash, &c. In this case, it would be better to submit it to the action of nitric acid, aided by a gentle heat. This acid, by its decomposition, will furnish a sufficient quantity of oxygen to convert the sulphur and arsenic into sulphuric and arsenic acids; bioxide of azote is at the same time formed and escapes, producing reddish-brown fumes, when in contact with the atmosphere. As soon as this reaction is over, which is known by the absence of the red fumes, the mixture of sulphuric and arsenic acids should then be diluted with distilled water, and afterwards subjected to the influence of Marsh's apparatus. This minute quantity of arsenical sulphuret, when carefully decomposed by nitric acid, will produce a sufficient quantity of metallic arsenic to cover nearly the entire surface of a common sized china plate.

The third compound of sulphur and arsenic corresponds to arsenic acid, and is without use. It never occurs native, but may be obtained by passing a stream of sulphuretted hydrogen gas through a hot solution of arsenic acid; a precipitate is thus obtained, which, when washed and dried, is of a pale yellow colour, fuses with great facility, readily dissolves in alkalies, and when heated is easily volatilised. It is represented by As_2S_5 ; arsenic acid being As_2O_5 .

Action of Water upon Metallic Arsenic.—It is necessary, Gentlemen, I should again recall your attention to what I have before mentioned relating to the class of metals we are now studying, viz. that two of them do not decompose water in the ordinary way. These two metals are arsenic and tellurium, both of which decompose water at the temperature of 100 deg. Cent. (212 Fahr.) The reaction, however, differs remarkably from that with other metals of the same class. Arsenic and tellurium unite with the two elements of water to form at the same time an oxide and a hydride—establishing this fact, that if metallic arsenic be submitted to the protracted action of boiling water we shall have formed at the same time arsenious acid, and a solid hydride of arsenic.

* Professor of Mineralogy and Materia Medica, Member of the Royal Academy of Medicine, &c.

† A mucilaginous compound of milk of almonds, sugar, gum, tragacanth, and orange-flower water

‖ Professor of Pharmacy of the School of Paris, Member of the Royal Academy of Medicine, &c.
§ Madame Laffargue's counsel.

We have now to examine the protracted action of cold water upon metallic arsenic: this will form the subject of the commencement of my next lecture.

COURSE OF CLINICAL LECTURES ON PNEUMONIA.

Delivered at the Hospital La Charité, by Professor CHOMEL.

LECTURE XXII.

Pneumonia developed in the course of Typhoid fever.—Pneumonia, when developed in the course of typhoid fever, is one of the most grave complications of this disease, both from its frequency, and the general state of the subject, and more especially from its most usually remaining latent; sometimes the fatal termination is so hastened by an intercurrent disease, that sufficient time is not allowed for ulceration of Peyer's glands to show itself, or, at least, to make much progress. In general, it does not commence till after the twentieth day of the principal malady, and is frequently preceded by pulmonary catarrh of greater or less intensity. In one form of this disease there is no change in the side, the respiration is somewhat constricted, the cough rare and dry, but sometimes accompanied with viscons sputa; at other times entirely absent, or else, after having been rare for some time, it suddenly becomes considerable and fatiguing; the cheeks present a roseated or violet flush, appearing and disappearing frequently in the course of the day; the pulse usually hard and frequent; percussion gives only a dull sound, while auscultation discovers, principally behind, a mixture of sonorous and sub-crepitant râles. In the other form, the patient suddenly complains, not of true pain in the chest, but only of oppression and fulness; the respiration more frequent and more constricted than in the preceding case; the sputa, if they exist, are purulent, viscid, and rounded, sometimes streaked with blood, but scarcely ever offering the true pneumonic characters; the cheeks are more coloured, and the conjunctiva frequently injected. Percussion gives a dullness and a degree of resistance and hardness, which, however, are much less marked than in ordinary hepatization; on auscultation discover bronchial respiration and bronchophony, usually marked by the humid râle. Crepitant but seldom appears in a distinct manner in the course of this affection; sometimes, however, combined with the dry and sonorous râle, but only over a very limited space. From the general state of the patient, the febrile condition, and prostration which he presents, as well as from the absence of several of the characteristic signs of pneumonia, (crepitant râle, rusty-coloured sputa), the dry and sonorous, or mucous râles, which are the proper râles of pneumonia, and the difficulty in placing the patient in a favourable position for auscultation and percussion; pneumonia, when developed in the course of typhoid fever, has a great tendency to remain latent, so that the pulmonary phlegma becomes disorganized before we even detect a lesion of this tissue; and this the more, as this complication most usually progresses with great rapidity. As a general and important consequence, therefore, we should practise auscultation and percussion, once a-day at least, in all individuals affected with typhoid fever, even when the respiratory apparatus seems to be sound. Fortunately, however, some general phenomena occur to attract the attention of the practitioner to the lungs; the respiration is accelerated, the pulse suddenly becomes much more frequent; sometimes the patient is small and weak, at other times it possesses considerable hardness; the prostration quickly increases; the features alter, the violet-colour of the face forms a striking contrast with the livid colour of the face. These symptoms, however, are entirely dependent on the invasion of the pneumonia; they are often owing, in a great measure, to extreme prostration of the patient; hence they often appear and disappear again several times in the course of the disease.

Exanthematous Pneumonia.—We understand by this term the pneumonia which supervenes in the course of variola, rubeola, or scarlatina.

It frequently happens that the commencement of these affections is marked by signs of pneumonia which disappear with remarkable rapidity immediately that the eruption begins to show itself. At other times the pneumonia continues to develop itself, and it then forms one of the gravest complications which can happen; in fact, under its influence, the eruption is but imperfectly and irregularly formed, or else it suddenly disappears, thus placing the life of the patient in the greatest danger. Sometimes, again, the pneumonia is developed during the course of the eruption; frequently, even when the original disease is disappearing, and the patient in a state of convalescence. In these various cases the pneumonia may assume various forms; one of the most frequent, as well as the gravest, being the typhoid species. Sometimes it assumes a metastatic character. But what especially deserves attention is, that exanthematous pneumonia often remains latent, unless we carefully employ percussion and auscultation, even where the respiratory organs present no functional lesion.

VII. Scorbutic Pneumonia.—This form of pneumonia is very rare at the present day: we must, therefore, borrow our description, however incomplete, from ancient authors. Thus Huxham says, "It manifests itself at first by a difficulty of breathing, by depression, frequent syncope, shivering, and erratic heats, with pains all over the body; fever then supervenes, with oppression at the hypochondria, dry and incessant cough, pulse frequent, small, and softer than in inflammatory peri-pneumonias, cold sweats, and constant restlessness and anxiety. Expectoration then takes place of a thin, putrid, sanguinolent or blackish matter, of an almost insupportable odour. This form of pneumonia is often accompanied by petechiæ of a red, brown, livid, or black colour; the urine is dark or blackish, as if a small portion of blood had been dissolved in it." He then cautions us against the too free employment of blood-letting.

VIII. Intermittent Pneumonia.—"Unless observation had taught us the contrary," says P. Frank, "nobody would have believed that peri-pneumonia sometimes ranges itself among the class of intermittent fevers. Peri-pneumonias of a grave character have, however, been frequently observed under the tertian type; and which, after moderate bleedings, have been promptly and almost invariably cured by Peruvian bark." Observations of fevers called *pernicious peri-pneumonias* have been made by various ancient authors, and which were almost always attended by fever characterised by shivering, heat, and diaphoresis, returning regularly every day or every second day, accompanied with pain in the side, oppression, and the expectoration of bloody or rusty-coloured sputa. But percussion and auscultation not having been employed, it is difficult to say whether pneumonia really existed in these cases. M. Henry speaks of having often observed a species of intermittent peri-pneumonia at Rochefort, a city, as we know, subjected to malarious emanations, and thence to various forms of remittent and even intermittent fever. The following is one of the cases which came under his observation:—

A man named Leduc, 45 years of age, of a sanguineous temperament, entered the hospital with an attack of bronchitis to which he was subject. Seven days afterwards he was seized with an acute deep-seated pain in the left side, and difficulty of respiration; frequent cough, accompanied with abundant and rusty-coloured sputa; dullness on percussion existed over the posterior and superior part of the left lung, and auscultation, says the author, showed that the organ was scarcely permeable to the air; the fever commenced with long and violent shiverings. (Demulcents; 30 leeches to the painful part; poultices.) The fever ran its ordinary course; in the evening there was abundant diaphoresis; the next day, there was perfect apyrexia, with cessation of all the pneumonic symptoms; the sputa became mucous, though still abundant. This state lasted the whole day; but towards four o'clock the next morning, the fever was again announced by shivering fits of equal intensity with those of the preceding attack; dyspnoea, acute pain in the side, and all the other symptoms of pneumonia, reappeared. (Venesection to 12 ounces; demulcents, &c.) On the

third day there was again perfect apyrexia; all the symptoms of the pneumonia had disappeared. (Lavement of decoction of bark, with the addition of 10 grains of the sulphate of quinine; febrifuge mixture.) The fever again showed itself, but the shiverings were confined to the feet, the sputa were only slightly streaked with blood, and the other symptoms of pneumonia were equally favourable. By continuing for some time longer the bark lavements on the days intermediate to the paroxysms, and the demulcents during the presence of the fever, the patient quickly regained his health.

This observation is, we may see, very incomplete in some of its points; the employment of auscultation was almost entirely neglected, so that it becomes a question whether this was really a case of pneumonia, or merely violent congestion of the lung accompanying intermittent fever. This point is, however, of little consequence in practice, since the regular intermission of the symptoms characterizing the affection will present a sure indication for the employment of quinine.

IX. Epidemic Pneumonias.—The incertitude of the causes which preside over the development of epidemic pneumonias, the variety of their symptoms, the irregularity of their progress, and the difficulty of their treatment, render the study of this form of pneumonia exceedingly difficult. I may add, that the materials collected by the ancients are very incomplete, both with respect to the symptoms of the disease, auscultation and percussion not being then known; as also in an anatomical point of view, from the fact of post-mortem examinations being then almost constantly neglected. This latter circumstance, in particular, throws the greatest obscurity over the true state of the organs which they found diseased; and to give a single example, we see that in several accounts of epidemic pneumonia, it is simply stated that the lung and vicinal organs were gangrenous, without its being shown in what this gangrene consisted; now, as these authors never speak of the *characteristic odour*, it cannot be admitted that the lesion was truly gangrenous. A very important circumstance to be remarked is, that in the immense majority of cases, and perhaps even constantly, epidemic pneumonia is not frank and isolated, so as to constitute the *entire* disease; on the contrary, it almost always forms but one of the *elements of the morbid condition of the subject*. We may hence conceive why epidemic pneumonias should differ so singularly among themselves in their causes, their symptoms, local as well as general, their progress, their duration, their gravity, their anatomical characters, and especially in the treatment which is most successfully applied to them. In epidemic pneumonias we find all possible sorts of complications, both local and general; a considerable number frequently occurring in the same subject. I will relate the history of a few of these epidemics.

Jean Colle relates, in his *Cosmistor Medicus*, that the pneumonia which reigned in 1601, in the duchy of Urbino and in the Marches, succeeded to tertian and continued fevers with petechiæ, and was complicated with pericarditis; in several post-mortem examinations a fetid water was found in the pericardium, and the lungs were full of a pituitous, sanguinolent, and purulent substance. Nysten speaks of an epidemic which declared itself in 1801 at Joigny, and which presented various symptoms of inflammation in the chest, with very intense fever; it was in many cases complicated with cynanche laryngea, and almost always with bilious symptoms. Its progress was so rapid, that unless an appropriate treatment was adopted from the commencement, the patient perished on the second or third day. In a small village near Joigny, twenty-four out of twenty-five patients died. In the epidemic observed by Deidier at Pujol in Languedoc, the pneumonia was accompanied by a livid eruption on the arms, the chest, and the abdomen, as well as by symptoms of worms. The thoracic inflammation in the epidemic described by Haller, was accompanied by a frothy diarrhoea, vomitings, headache, and drowsiness; some patients perished in twenty-four hours; the extraordinary cold of 1763 put a stop to this epidemic. The lungs and stomach were gangrenous in the epidemic which reigned at Rouen, and

which spread into the province of Orleans; in this latter locality it was contagious. The tongue was dry and black, the face pallid, the abdomen tympanitic; in almost all the effected individuals the stools were serous, and of an insupportable odour; the surface of the body was covered with a *purple-coloured eruption*. After death there were found in the lungs disseminated points of a dark and livid colour, of the size of grains of millet-seed, and full of a fetid liquor. Measles and small-pox were combined with the epidemic pneumonia which prevailed in Brisgaw, in 1688, as described by Vorster; in some cases, also, it was accompanied by a semitertian fever of a fatal character, which carried off the patients towards the third or fourth paroxysm; colliquative diarrhoea and convulsions in many cases still further complicated the disease. On opening the bodies, the lungs were found acutely inflamed and hepatized, purulent and sphacelated in some points; the chest and pericardium were filled with a sanguinolent serosity, and polypi were discovered in the right auricle of the heart. This epidemic had, according to authors, a decidedly contagious character. One of the most striking examples of epidemic pneumonia, which at first appeared to constitute the entire disease, but which quickly became complicated with formidable lesions, referrible only to great alteration in the liquids, is that related by Dr. Pigeotte of Troyes. He states that the greater part of the patients, after having offered all the symptoms of inflammation of the pleura and lung of one side, sometimes of both, suddenly presented, on the second or third day, a *putrid or adynamic state*, and died before or towards the end of the first week. He also speaks, in other parts of his Memoir, of sphacelus of the lungs and surrounding parts, announced, according to him, by the softness and the brown or greenish colour of the tissue, as well as by the facility of tearing it, &c.; but nowhere does he speak of the *gangrenous odour*, the only pathognomonic sign of gangrene. I should, hence, be inclined to place this epidemic in the class of adynamic or putrid pneumonias, and not in that of gangrenous epidemics, as stated by M. Pigeotte.

I will now make a few remarks on that form of epidemic pneumonia which has, at various periods, accompanied the catarrhal affections denominated *morbus russicus*, *influenza*, *epidemic catarrh*, and which also takes the name of *spurious pneumonia* (*peri-pneumonia notha aut spuria*.) In various cases which I have observed, the pneumonia did not supervene immediately after the invasion of the influenza; it rarely manifested itself before the second or third day; the ninth day was the mean term. The commencement of the affection was generally difficult to determine, most of the symptoms indicative of ordinary pneumonia being obscure or wanting. Thus the shivering fit and pain in the side were transient or else completely absent; the cough was not increased, and the sputa were white and mucous. In some cases, however, the pneumonia manifested itself at the commencement by the same characters as ordinary pneumonia, that is to say, by the shivering, the pain in the side, the nature of the sputa, &c. The disease once declared presented the following symptoms: the crepitant r  le was frequently wanting, or else it was very transient, and sometimes disappeared at the end of twenty-four hours; frequently it was replaced by a sub-crepitant r  le, with large and humid bubbles, and intermingled with sibilant and sonorous r  les. Bronchial respiration, sometimes very marked, was often mixed with mucous r  le, but when the pneumonia was complicated with pseudo-membranous bronchitis, the bronchial respiration remained pure and without any intermixture of mucous r  le. Percussion presented, as in ordinary pneumonia, a more or less marked dulness; this sign was, however, sometimes doubtful. The sputa were those of bronchitis, during the two or three first days; they then became viscons, semi-transparent, reddish, and more frequently of a yellowish colour, like barley-sugar; it was only in the graver cases that they resembled the juice of prunes; frequently they became greyish, opaque, and adhered to the bottom of the vessel; this was a very bad sign. Lastly, in some cases, the pneumonia ran through all its stages, without imprinting its peculiar characters on the

expectoration. The respiration in some cases did not appear at all constricted; at other times the dyspnoea rapidly acquired an extreme intensity, which was easily explained by the accumulation in the bronchi of a large quantity of clear or viscid mucus. In some rare cases, violent paroxysms of suffocation were induced from this cause. The pulse in this disease was generally small and slow; most frequently it varied from sixty to sixty-eight, and scarcely ever exceeded seventy-two; in two patients only it reached to eighty-six. The blood drawn from the veins frequently presented a remarkable alteration, the coagulum being less firm and resistant; this phenomenon was in exact relation with the depression of the individual. The heat was frequently below its ordinary standard, the extremities were often cold, the face pallid, the lips blue, and the prostration extreme. In some cases, cerebral affections supervened, as convulsions, delirium, and coma, which accelerated and perhaps determined the death of the patient, without any material alteration being discoverable in the brain or nervous system.

This form of pneumonia sometimes progressed slowly, at other times it marched with extreme rapidity, and most frequently terminated in death; when the issue was favourable, convalescence was usually long and difficult. The diagnosis was frequently with difficulty established, by reason of the obstacles which presented themselves in the employment of percussio and auscultation: still, these two processes were, in the greater number of cases, the only means of discovering with certainty the inflammation of the lung. Thus, in patients in whom the temperature was natural, the respiration no-wise accelerated, the pulse of its ordinary frequency, patients who were constantly soliciting to eat, there were still found dulness and bronchial respiration over a great part of both lungs, especially on the posterior and inferior parts. Without percussio and auscultation, the pneumonia would certainly have remained entirely latent.

Can we by any especial signs discover, during life, the formation of *false membranes*, which so frequently complicate this form of pneumonia? I should say certainly not. In fact, the sputa, which were usually white, mucous, and scarcely rusty-coloured, never to my observation exhibited the presence of these formations; auscultation discovered only a pure bronchial *souffle*, without admixture with sub-crepitant or mucous r  les, even to the last moments of life; the insidious progress of pneumonia, and the adynamic or ataxic form, accompanied equally the disease complicated with false membranes, as that which was exempt from this complication. The constitution of the patient, and the mode of treatment, indicate nothing precise in this respect, since of ten cases of pneumonia with false membranes in the bronchi, four occurred in weak and broken-down constitutions, while six took place in individuals who enjoyed good health, up to the moment of invasion of the influenza. The treatment did not appear to have any marked influence over the development of this complication; for of the above individuals, some were subjected to blood-letting alone or combined with emetics, others to the action of revulsives and antimony. This form of pneumonia with pseudo-membranous bronchitis assumed a very rapid progress; in eight cases, the duration of the disease was only from three to five days.

MEDICAL RETROSPECT FOR THE LAST SIX MONTHS.

By W. BRAITHWAITE, Esq., Leeds.

No part of practical medicine has been more discussed than have Percussion and Auscultation: and no branch of our studies has been attended with more important results than the almost certain knowledge which we can now possess, in any individual case, of disease of the chest. At the same time, we must confess, than in our own profession, there are more practitioners ignorant of the most modern views on these subjects, than are the members of most other professions of the recent advances in their particular avocations. There may seem to be an apparent complexity in making ourselves acquainted with the multiplicity of

sounds in examining a healthy or diseased chest, but all these different kinds of sound may be resolved into very few, and after that is done, a good deal will depend upon the assiduity of the practitioner in perfecting himself in the detail. The French practitioners seem to take a delight in drawing as many fine distinctions as possible, in order to display that accuracy of diagnosis which they certainly possess in a very superior degree, but which is too frequently practised to the exclusion of the still more important duty of treatment. We would say of the French and British practitioners, that the former take most delight in figuring out the nature of an affection, and the latter in curing it. A patient may go to Paris to have a disease accurately diagnosed, but he must return to London to have it cured. These observations are chiefly drawn from us after the perusal of a very practical Lectures by Dr. Watson; in which he has done a good deal to simplify the study of the diseases of the heart and lungs.

We are glad to perceive greater attention paid by manufacturing chemists to the preparation of different extracts in common use; but unless the practitioner has confidence in the integrity of the druggist, and can depend upon his judgment and skill in the selection of his plants, and in the preparing of them for use, we are convinced that the sale of these, as well as of all the other drugs which can be, and which are so extensively adulterated, will be considerably limited. For example, how different is the effect produced by some extracts of dandelion to that of others; and when properly prepared, we are persuaded that it is a valuable remedy in many hepatic affections. We have given the opinion of some celebrated practitioners as to its uses; and we should be disposed to think, with Dr. Wilson Philip, that when an extract of dandelion is properly prepared, (and not so, the root itself taken in infusion,) it will be found a valuable remedy in those affections of the liver in which we are too apt to give repeated doses of mercurials. Perhaps a combination of taraxacum with the nitro-muriatic mixture will be found one of the best substitutes for mercurials which we possess, and in those constitutions where mercurials are inadmissible, this combination will be found invaluable. Dr. Scott was chiefly instrumental in bringing the nitro-muriatic mixture before the public, somewhat above twenty years ago; but, though recommended by Dr. James Johnson and other eminent physicians, it has never been sufficiently tried in cases of disordered liver and obnate constipation. The way Dr. Mettauer makes this mixture is, with equal parts of nitric and muriatic acids and water, and of this he gives from six to twelve drops, properly diluted with sugar water, three times a day, varying the doses, so to give the largest at noon and at night: of course the medicine must be given through a small can of reed to prevent its action upon the teeth. At the same time, from thirty to forty drops, diluted in two or three times as much simple water, may be applied with a sponge over the region of the liver and epigastrium, and to the insides of the arms and thighs, having previously washed away from the skin with soap and water its unctuous secretion, to enable the acid mixture more readily to penetrate. The effect of this remedy will often be manifested in three or four days, when the bowels, previously constipated, will be found to act regularly, and the secretions of the liver to assume a more healthy aspect.

There are many cases of puerperal mania which are owing to an obstinate condition of the bowels, with a collection of morbid secretions in the system, which it is sometimes exceedingly difficult to overcome. In these cases, the nitro-muriatic mixture will occasionally be found of great use, and when used properly diluted and with caution, is a perfectly safe remedy; but it will be found equally valuable in these cases as an external application in the way just recommended, viz., by sponging different parts of the body with the lotion. Mettauer states, that this medicine is not only useful in hepatic disorders and obstinate constipation, but also in uterine affections of a sub-inflammatory nature, in some of the forms of erysipelas, and in nearly every variety of psoriasis.

The nitro-muriatic mixture seems especially adapted to those cases "which are based in chronic inflammation or engorgements of the capillary and parenchymatous structures of an indolent nature, either as the primary pathological condition of these structures, or the consequence of inflammation." And in this view it resembles in a great measure the action of mercury. In cases which are decidedly inflammatory, the use of this mixture is not to be recommended; as a general rule, it must never be used in *acute* diseases, on account of its power of exalting the action of the economy, and only in *chronic* affections with very slight febrile disturbance. Some have attributed the effects of this medicine to the presence of chlorine, as Dr. Mattacur found very similar effects from a solution of chlorine in water. If, therefore, this remedy be tried in combination with the taraxacum prepared by Mr. Houlton, we shall have an agent of remarkable efficacy in many chronic affections of the abdominal organs. "M. Polex has extracted from the milky juice of the *Leontodon Taraxacum*, a crystallizable substance, which he has designated Taraxacine," but we are not aware of any advantage to be derived from its use, more than from the use of the common preparation.

It seems now generally acknowledged, that the phenomena attending a fit of asthma are to be attributed to spasm—to a spasmodic action, especially of the different fibres which encircle the air-tubes, and which may be distinctly seen when hypertrophied, encircling the larger bronchi, and which have been traced by Reissessen in tubes of a very small diameter. Laennec states that he has seen them in tubes less than one line across. Some anatomists doubt their muscularity; but we must attribute to them the action of muscles, and suppose that they are slender muscles like those which surround the intestines and urinary bladder: this view is corroborated, not only by the experiments to prove the contractility of the lungs and air tubes, as mentioned by Dr. Watson, but also by the circumstance mentioned by Valentin, who found that the rings of the trachea could be made visibly and distinctly to contract, by irritating the par vagum. A fit of asthma, therefore, may be considered a spasmodic affection, during which it is very difficult to inflate the lungs: hence, the respiratory murmur is generally absent. An ingenious method of expanding the chest, in cases of spasm, is that recommended by Mr. G. Robinson, who orders the patient at the end of every inspiration, or just before he is about to empty his chest, to close his nostrils and mouth so as to prevent the act of expiration; the patient will be instantly compelled to inspire again when the fingers are withdrawn from the mouth and nose, and thus the chest will be effectually expanded. But this practice is not yet sufficiently corroborated by the experience of other practitioners, to allow of full confidence being placed in it: it may, however, be tried with impunity. Narcotics, perhaps, are our best remedies: opium is generally used in one form or another, but some patients place the greatest reliance on stramonium, provided that it be taken at the very commencement of the attack; but if the spasmodic action be once fairly established, neither stramonium nor any other anti-spasmodic will have a very powerful effect. Perhaps the *Lobelia Inflata* will be found a valuable addition to our remedies, not only from its possessing the soothing properties of tobacco, but from exciting that copious expectoration, which is sure, in many cases, to give relief.

Some years ago, Mr. Bates, of Sudbury, published a pamphlet on the treatment of peritonitis by opium, which made a great impression on the minds of many practitioners. His treatment consisted in keeping the intestine perfectly quiescent during the inflammatory action; but the judiciousness of the opium treatment must frequently be called in question, especially when uncombined with calomel; but in those severe cases where ulceration and perforation are strongly apprehended, the opium treatment is invaluable. To keep the bowels perfectly quiet for several days together, allows Nature an opportunity to agglutinate one portion of the intestines to another, and by this means to place a barrier to the escape of feces into the peritoneal cavity. Dr. Stokes truly remarks, that these cases sink with awful rapidity, and give

no time for active treatment: mercury and purgatives would excite the bowels so as to *tear asunder* the newly-formed adhesions. In ordinary peritonitis, however, it would not be advisable to pursue this mode of treatment, but to combine it with bleeding and calomel, as recommended by the best authors. Dr. Stokes gives some excellent cases, to show the value of the opium treatment. In one case which recovered, 105 grains of opium were given, besides what was administered in injections; and he alludes to another case which was successful from the same treatment, where peritonitis had supervened upon the bursting of an hepatic abscess into the cavity of the abdomen.

We have lately had a case of poisoning by arsenic completely prevented by the administration of the hydrated peroxide of iron, as recommended on previous occasions, and we shall rejoice if the same success attends the administration of gold-leaf and iron filings, in cases of poisoning by corrosive sublimate. The combination of those two substances has been found by Dr. Buckler, of Baltimore, to form a galvanic antidote to this poison, which has some ground for confidence, although it will require more evidence to establish our opinion of its complete efficacy. All the compounds of mercury are more or less poisonous, but none more likely to be so than the corrosive sublimate or bichloride, on account of its being introduced so much in the process of tanning, and to prevent the decay of timber, as well as in the destruction of insects; thus exposing individuals to the danger of introducing it accidentally into the stomach. Gluten and albumen have hitherto been our chief antidotes, especially albumen, which changes the corrosive sublimate into calomel, and thus renders the patient liable to very severe salivation, which, of itself, is attended with inconvenience and even danger. Dr. Buckler, amongst other experiments, found, "that by throwing gold-leaf into a solution of mercury no action took place till iron-filings were added, when the metallic mercury was at once revived, and was seen to precipitate into a state of amalgam with the gold; at the same time, the oxygen from the corrosive sublimate goes over to the iron, and forms an oxide of that metal with which the chlorine combines, leaving a hydrochlorate of iron in solution."

The result is a complete decomposition of the poison. Two grains of gold and two of iron are sufficient to decompose five grains of corrosive sublimate. Dr. Buckler gives a minute account of his views and experiments on the action of this antidote in living animals, to which we refer the reader. Mr. Barry thinks that Dr. Buckler's discovery may prove exceedingly important, but seems to disagree with him on some parts of the question. He is of opinion, that the decomposition is owing "to the thin stratum of fluid immediately enveloping the two contiguous particles of iron and gold;" and, therefore, that "it is essential that these metals should be in a state of division so exceedingly minute, as to remain a short time in suspension throughout the whole fluid of the stomach. Every drop of that fluid must be made to contain a multitude of these particles, and yet the entire weight administered be very small." The chief difficulty in this case will be, not in the minute division of the gold, but, in that of the iron. It is probable, however, that in this combination of gold and iron, we shall possess, when properly managed, a complete antidote to one of our commonest and strongest poisons.

In those neuralgic affections, which do not depend upon any organic affection, nor on any constitutional principle situated in the nerves themselves, such as the virus of syphilis, the oil of turpentine will occasionally be found to relieve when the more ordinary methods of treatment fail; this will be found especially the case when the nerves of the upper and lower extremities are implicated.

As we are great advocates for the use of nitrate of silver in ophthalmic cases as well as in many other maladies, especially of the stomach, we are glad to see it gaining that confidence to which its remedial powers entitle it. In gonorrhœa, we find it of inestimable use, when we use it in the strength recommended by Mr. R. Carmichael, viz., beginning with about a quarter of a grain to the ounce of distilled water, and increasing the

proportion gradually to that which can be borne with impunity: seldom exceeding one grain to the ounce. We should prefer this mild injection to those which are stronger, although it is frequently used of the strength of from one to four grains to the ounce. In *chilblains* a solution of this substance, of ten to thirty grains to the ounce, and even a drachm to the ounce, if necessary, will often be found superior to the tincture of camphor, and every other remedy in these troublesome affections. In *hemorrhoids*, too, the nitrate of silver, when made into an ointment, will be found a valuable application. It may be made of five to ten grains of the powdered nitrate of silver, to an ounce of lard. This is more particularly useful when the piles are recent. When the hemorrhoids arise from internal piles, or from congestion of the lining membrane of the anus, a solution of the nitrate in the proportion of ten to thirty grains to the ounce, is preferable to the ointment; not more than a drachm of the solution is to be injected at once.

The treatment of painters' colic is sometimes very tedious and unsatisfactory, considering the pain which is frequently endured before the affection is overcome. It is recommended to be treated by putting the patient into a warm bath, and giving him glysters while in the bath, making use of the warm water in which he is placed. Dr. C. J. B. Williams recommends in addition, that the powerful purgatives which we give in these cases should be combined with belladonna, in order to relieve the excessive pain, and followed up with alum when the bowels have been freely opened. Half a grain of the extract of belladonna may be combined with two or four drops of croton-oil and given every third hour till the effect is produced, and this may be followed up with ten grains of alum three times a day. Lead seems to impair the action of the bowels without diminishing their sensibility; and hence, portions of the canal become distended with their contents, without having the power to propel them forward. The combination, therefore, is a powerful purgative to stimulate the paralysed intestine into action, and belladonna to lower its sensibility, without counteracting the powers of the purgative, is judicious treatment. Dr. Williams mentions a curious fact with regard to belladonna and stramonium, that in animals poisoned by them, the alimentary canal retained its sensibility, while that of the bronchial fibres was quite destroyed. The exhibition of alum is to promote the chronic contraction of the bowels afterwards. It may still be combined with belladonna if necessary.

We cannot but agree with Dr. Edwards and Mr. Snow in their views respecting the best mode of resuscitating drowned persons, and children which have been still-born. Dr. Edwards has certainly shown that asphyxia takes place more rapidly at blood-heat than at inferior temperatures; and he has, moreover, shown "that the quantity of oxygen consumed, and the necessity for aspiration, keep a direct ratio with the development of natural heat; and likewise, that the application of heat to the body increases its power of developing caloric, whilst the abstraction of heat by any cold meridian had a contrary effect." By putting a patient into a warm bath during a state of asphyxia, therefore, we cause the system to require more oxygen, and must, therefore, increase the asphyxia and hasten death, unless respiration is by the stimulus re-established. This seems to be very much confirmed by the want of success in the Royal Humane Society, where warmth is generally employed; whereas, some time ago, when less energetic measures were taken to restore the warmth of the surface, persons were frequently restored who had been submerged ten minutes; and in one case even twenty minutes. And in the report of a Society at Amsterdam, persons are said to have been restored who had been a quarter of an hour, a half an hour, and one a whole hour under water. This is reported by a scientific society, and when we remember that when a person has been only five minutes under water, and may be other ten or fifteen minutes without breathing, we may easily suppose it possible for him to be this length of time under water and still be restored. To promote respiration, therefore, ought to be the great object in resuscitating drowned persons or still-born children.

and this ought to be done immediately by performing artificial respiration; and at the same time the surface of the body should be kept cool till respiration is reestablished, in order that as little as possible of the oxygen which remains in the system may be consumed. While on the subject of asphyxia we may refer to the experiments of M. Leroy d'Etoiles, who has suggested galvanopuncture in a manner which, at first sight, appears formidable. "He introduces an acupuncture needle on each side between the eighth and ninth ribs, until it reaches the fibres of the diaphragm. He then establishes a galvanic current between the needles, by means of a pile of twenty-five to thirty pairs of plates an inch in diameter. In his experiments the diaphragm was instantly made to contract, and an inspiration was taken; then by interrupting the circle and gently pressing on the abdomen, the diaphragm again ascended, and an expiration was accomplished. Leroy was thus successful in restoring animals which had been under water above five minutes; but upon the whole the experiments were more interesting than really practical, and could only be brought forward in aid of the more usual means of inducing artificial respiration. A very extraordinary case of resuscitation is related by M. Trosscau, where the patient had breathed his last a few moments before the operation of tracheotomy was commenced. The heart commenced beating in about a quarter of an hour, and in 57 minutes a deep inspiration was taken. This operation would no doubt be advisable as a last resource in many cases of drowning, as well as in those cases of asphyxia caused by actual disease. When the practitioner is called in haste to such a case, he may adopt the practice of M. Mashieurat, of drawing aside each lip of the division of the cricoid cartilage with a bent pin, to which a string may be attached, and tied behind the neck so as to keep the wound open. The cricoid cartilage and three rings of the trachea may be divided with a probe-pointed bistoury introduced through a wound previously made in the thyroid membrane; or, the trachea having been laid bare, "it may be punctured at the inferior angle of the wound with a sharp-pointed bistoury, and the rings and cricoid cartilage may be immediately divided by directing the same instrument upwards."

A good deal has of late been said and written on the continent respecting the powers of the waters of Vichy to dissolve urinary calculi; but we suspect the power of this remedy will be inferior to other more powerful alkalies, especially when they are taken largely diluted. The waters of Vichy must be chiefly efficacious from containing the carbonate of soda, lime, and magnesia, but we see no reason why the alkalies, artificially prepared, may not be far superior in efficacy.

In many cases of renal dropsy we shall find elaterium of essential use to us. Medical men are already well aware of the excellent effects of this drug. Bleeding and diuretics are in their way of great value in such cases, but the removal of serum from the abdomen, and albumen from the urine, must generally be accomplished by the use of elaterium. Dr. Clendinning advises a very judicious mode of administering it; viz., in minute doses at intervals throughout the day, which is generally followed by copious evacuations, and the increased activity of the bowels is generally accompanied by corresponding activity of the kidneys, and copious evacuations of urine. By steadily persevering in this treatment, a constant flux is maintained which soon exhausts the serous effusions. It is well always between each day of purgation to have a refreshing night's rest; which is of course the more wholesome when natural, but, if necessary, opium must be resorted to, to procure the necessary rest. The use of opium at night not only procures the necessary sleep when Nature will not allow it, but induces in the patient a much greater tolerance for the drug.

Dr. James Johnson suggests that the Chinese mode of smoking opium may be made useful in certain dangerous and painful maladies, where the common mode is found to be inefficient, and attended with great derangement of the digestive organs. The Chinese method induces a profound sleep, and insensibility to all mental misery and coporeal pain, which cannot be induced by opium

taken into the stomach, and may, therefore, at some period, be used in cases of tetanus, hydrophobia, tic-doloureux, and violent spasms, where the common mode of giving opium by the stomach so frequently fails. Dr. Johnson adds, that "the various preparations of opium might be easily smoked by means of a common pipe, and the powerful effects induced in a very short space of time without the possibility of their being rejected by the stomach, or prevented from acting energetically on the sensorium, and throughout the whole nervous system."

The researches of M. Bouchardat on Diabetes Mellitus are probably well known to many British practitioners, but not to all, and we would therefore direct particular attention to his interesting cases, although we cannot quite agree with him in his theory, which is evidently too chemical. He supposes that diabetes originally arises from suppressed perspiration, in other words, "from the acid secretion of the skin being suddenly and completely interrupted," in consequence of which the secretions of the mucous membrane, and of the glands of the digestive organs, are altered in their chemical composition, and become almost completely acid instead of being alkaline. Now although M. Bouchardat acknowledges the superabundant acids in the digestive organs cannot of themselves act on the fecula so as to change it into sugar, yet he affirms that whenever the organic acids exist in considerable quantity, we simultaneously encounter that modification of albumen which acts in converting fecula into sugar, as occurs in the ripening of fruits. In consequence of this theory, M. Bouchardat bends his whole attention to restoring the functions of the skin, and in giving such aliment as contains the least possible quantity of sugar, such as bread made of gluten, &c.

Bouchardat's opinions, although very plausible, are objected to by men equally eminent. The sugar, no doubt, is formed in the process of digestion, and afterwards becomes conveyed by the blood to the kidneys, where it is eliminated with extraordinary rapidity, so that large quantities are never to be met with in the blood at any one time. Dr. Prout supposes that diabetes originates in loss of power to assimilate the saccharine principles which we take as food. The formation of sugar in the stomach, is a healthy process; but when that sugar cannot be assimilated to the constituent principles of the blood, and through them into the living tissues of the body, it gives rise to diabetes. According to this theory, which we should regard as more correct than Bouchardat's, the great principles of treatment consist in strengthening the digestive and assimilating functions, and in preventing, as far as possible, the formation of sugar in the stomach, by giving only those articles of diet which are as free as possible from saccharine principles; the last object is almost attained by giving what is called gluten bread; and although this does not exert any positively enervative power, it gives time for Nature to exert her influence in the system. Majendie proves by experiments, that gluten extracted from wheat flour is of itself sufficient for the nourishment of dogs, and it is probable that man might be sustained for a very considerable time on gluten and animal food; but as bread made of gluten is too leathery to be easily masticated, it is necessary to mix a certain quantity of starch with the gluten; one-fifth part of starch in the bread renders it sufficiently easy of mastication. Bravais relates two cases which were completely cured, although the following articles of diet were allowed:—animal nutriment, beef, mutton, fowls, bacon, milk in every form, eggs, cheese, chocolate (without sugar), occasionally spinach, chicory, sorrel, cabbage, and onions; while the following articles were strictly prohibited:—bread, potatoes, rice, barley, vermicelli, haricots, sugar, apples, pears, raisins, and all food gummy, saccharine, or feculent.

The union of acupuncture with electricity, constituting what is called electro-puncture, has been found of great use in many neuralgic affections. The operations consist in employing one or several needles, and making a communication between them and the prime conductor of an elec-

trical machine, or they may be made to form part of the circuit in the discharge of a Leyden jar. "Majendie affirms that he has treated many cases of incomplete amaurosis with great success by this agency. He employed it, however, in the form of what has been more properly termed galvanopuncture,—by fixing a needle in the fronta nerve, and another in the superior maxillary, and making these communicate respectively with the poles of a galvanic pile of twelve pairs of plates, each six inches square."

Mustard poultices are becoming more and more useful in practice, and every improvement in the mode of using a common application ought to be known. The oil obtained from mustard seed seems to us likely to prove a more convenient, and at any rate, a much cleaner application, than the common poultice. It may be rubbed on the surface of the skin, when properly diluted, or it may be applied on strips of linen wetted with the solution. The first is advised when the skin is delicate and the latter where a more powerful effect is required. The great advantage of mustard poultices is, their immediate effect, and the great degree of counter-irritation which they produce. The oil of mustard seed is an application, which when properly secured in a well-stoppered bottle, the practitioner can carry in his pocket to those cases which require immediate attention. Dr. Meyer uses twenty-four drops of the oil to an ounce of rectified spirit, or five or six drops to a drachm of oil of almonds; but owing to the great volatility of the oil, it is not only necessary to keep it in well-stoppered bottles, but also to mix it for use with the spirit or oil only when required. While speaking of counter-irritants, we may suggest, that the concentrated tincture of capsicum, as recommended by Dr. Turnbull, will be found an improvement, in those cases where we want to produce powerful rubefacient effects; and in those cases of enlarged tonsils, and even in deeper seated inflammation of the submucous tissues which so often follows scarlatina, a combination of capsicum with the powdered, or solution of, alum (as recommended so strongly by M. Velpeau) will be found an improvement. It may be made by combining three parts of alum with one of the concentrated tincture of capsicum, and after drying them it may be applied in the powdered state to the tonsils as before recommended. We can truly affirm that the treatment of Velpeau is most excellent, and the effects admirable.

The sedative agency of cold to the spine in the form of ice, has been found, by Mr. Pincott, to be valuable in those cases of infantile convulsions which depend upon an irritable state of the cerebro spinal axis. It may be applied in an ox-gullet along the course of the spine, from the occiput to the sacrum. In the case related by Dr. Todd, in which the ice was applied at the suggestion of Mr. Pincott, the convulsions ceased in ten minutes, although they had existed a considerable time, and had resisted all the usual means of treatment.

Mr. Tyson, of Ashbourne, has been in the habit of using different preparations of iron, antimony, and mercury, to those which are generally known and prescribed by the profession, and if the elegance and value of these preparations equal the praises which he heaps upon them, we shall be in possession of very excellent modes of preparing these valuable medicines. We cannot enter minutely into the merits of the different preparations, which we leave to abler chemists than ourselves. The liquor Oxysulphatis Ferri, which is in constant use among the practitioners of Derbyshire, seems to be a very excellent and powerful preparation of iron, composed of sulphate of iron, nitric acid, and water. "The oxygen of the nitric acid uniting with the sulphate of iron, forms a per-sulphate; at the same time the iron is converted into red oxide. As a medicine it far surpasses the Tinct. Ferri mur., and it never precipitates the oxide of iron." We strongly recommend the reader again to refer to these excellent formulæ. The preparations of mercury and antimony used by Mr. Tyson, are also differently made to those in general use by medical men, and equally worthy of consideration by the practitioner and the chemist. James's fever powder is a preparation so frequently required, and at the same time so expensive, that if we could

obtain a good substitute it would be very desirable. This, Mr. Tyson states he has accomplished.

It occasionally happens in cases of poisoning by laudanum that the most powerful emetics fail to produce vomiting; and notwithstanding the praises heaped upon the use of the stomach pump, we are persuaded that it is too often a useless application, not only from the impossibility of thoroughly cleansing out the stomach by it, but also from the difficulty of using it under some circumstances: Nature herself will always accomplish what we want, better than will any such artificial means. In a case of this kind, published by Dr. Buck, the patient had swallowed an ounce of laudanum, and the most powerful emetics were unable to produce any effect: forty grains of pulv. ipecac. with forty grains of sulphate of zinc, then 200 grains of ipecac. and the same quantity of sulphate of zinc, and ultimately 24 grains of tartar emetic, were tried in vain under these circumstances; and as the patient was evidently becoming worse, pulse slower, face livid, and respiration nearly extinct, Dr. Buck injected a pint of vinegar into the stomach, and immediately after it a large tea-spoon four times heaped full of sal æratus dissolved in half a pint of warm water. "The effect was instantaneous. It broke forth foaming from the mouth in a stream of the full size of that orifice, with such a force as to be projected a yard or more." In about fifteen minutes the operation was repeated, using only half the quantity of vinegar and the same quantity of sal æratus and water. Green tea was afterwards administered; and next day the patient, although greatly prostrated, was perfectly rational, and gradually recovered.

On a former occasion we made several additional notices respecting the use of croton oil in tic doloureux and other nervous affections, which we can corroborate from our own experience in numerous cases which have come under our notice. Dr. Easton, of Glasgow, relates another case where this remedy was remarkable. Its good effects do not seem to depend entirely upon its purgative qualities, but upon some resemblance in its operation to the effects of *colchicum autumnale*. This is corroborated by the fact, that with the use of both *colchicum autumnale* and croton oil, the urine is increased in quantity, and is evidently denser than usual, the alvine evacuations being yellow and most offensive. The seat of neuralgia may be supposed to be frequently in the fibrous neurilema, while the good effects of *colchicum* are perceived, more especially when the fibrous structures of joints are affected, thus showing that there is some identity of tissue for the good effects of both *colchicum* and croton oil to show themselves. Dr. Lewins, of Leith, has shown that by the exhibition of *colchicum*, the specific gravity of urine rises from 1.009 to as high as 1.037, owing to the increase of urea and of urate of ammonia, and that, as during the use of croton oil, the feces become of a bright yellow colour, "the liver being stimulated apparently through the duodenum, in accordance with the physiological law, that when a membrane is irritated on which an excreting duct opens, the gland from which that duct proceeds is excited to unusual secretory activity." Dr. Easton then asks the question, "Can it be that the croton tiglium is similar in its action to that of the *colchicum*, and that it does good in tic doloureux by inducing the same effects that *colchicum* does, when it alleviates the sufferings of the gouty and rheumatic—by eliminating the urea and uric acid salts through the urine, when these highly nitrogenous productions of the blood are in excess, and thereby the sources of constitutional irritation, and also by causing a super-secretion of bile?"

In those cases where very rapid vesication is required, Mr. Edwards accomplishes this by rubbing the part with some inflammable body, and then setting fire to it; æther, spirits of wine, gin, or any other spirituous application may be made use of. It is another way of applying the actual cautery, and ought only to be used when the case is of a serious and very urgent nature; hot water applied to a part will have the same effect.

A process was invented some time ago by Dr. Whiting, for making bread without yeast, by combining muriatic acid and carbonate of soda so as to produce common salt in the dough. Mr. Dodson

improved upon this, by using larger proportions of the muriatic acid and soda, and thus produced an unfermented bread which was exceedingly valuable for weak stomachs, being free from all yeasty particles, and not so liable to create flatulence or turn acid. Mr. Dean has published a method rather different to the others, but on the same principle, viz:—

Flour, 3 lbs. imperial; cold water, 1½ pint imperial; sesquicarbonate of soda, ½ oz. (troy weight); hydrochloric acid, 5 fluid drachms; a small quantity of salt if required. Mix the soda perfectly with the flour, and the acid with the water, then the whole intimately and speedily together, using a flat piece of wood or spaddle for that purpose, in preference to the hand. It may be made into two loaves, and put into a quick oven immediately. It will require about an hour and a half to bake. The acid is the muriatic of commerce, and should have a specific gravity of 1.16. It should be mixed with the whole of the water to be employed. It requires a hotter oven and more time to bake than fermented bread does.

(To be concluded in our next.)

CASE OF LOCAL TUBERCULAR DEPOSIT ON THE SURFACE OF THE BRAIN.

By ROBERT DUNN, Esq.*

THE patient was a little boy, two years old, a fine intelligent child, who had been healthy from the time of his birth. He had suffered little during dentition: at eleven months he had twelve teeth, and could then walk alone. On the 7th of October he was first seized, and he died in about six weeks, on the 15th of November. He had awoke in the morning as usual, and was suddenly seized with a jerking or convulsive twitching of the left hand, but which did not extend beyond the wrist. Excepting this continued convulsive jerking of the hand, the child seemed to be quite well. There were no indications of general derangement. About a fortnight before the child had fallen down stairs, and from that time had been irritable and fretful. In about twenty minutes the jerking subsided; it returned the next morning for half an hour, and then extended to the elbow. The following morning there was a slight attack, and the next day passed without any jerking, but there was partial paralysis of the hand and arm, pyrexia, and general constitutional disturbance. He complained of pain in the head, and frequently applied the hand to the right temple. He had been freely purged at first. Leeches were now applied; counter-irritants; cold lotions and ice to the head; saline medicine; and calomel and James's powder every four hours. This course was pursued throughout the disease, and the mercurial ointment was also applied to the armpits night and morning, but salivation was not induced. During the next four or five days he had frequent attacks of the convulsions, not confined to the hand and arm, but involving the whole of the left side and lower extremity in convulsive agitation, with twitchings of the eye and angle of the mouth, the attack lasting for hours. He cried, and even screamed violently towards the termination of the fits, but was sensible throughout, and could at times be soothed by his parents. The attacks were followed by profound sleep for several hours, and the side was left partially paralysed. For about a week he had no return of the fits, except occasional jerkings of the hand and foot; the paralysis was not persistent. He was dull and heavy, sleeping many hours, yet sensible when awoke, and eager for food. He had a quick but weak and irritable pulse; dry, hot skin,

and great thirst. He was then seized with a kind of cramp or spasm in different parts of the affected side, arm, and leg. The pain was most distressing, and seemed, as in ordinary attacks of cramp, which it closely resembled, to be in some degree relieved by active friction. After suffering in this way for three or four days, he was left with decided symptoms of effusion. The convulsions returned, attacking the right side in a similar manner in which the left had at first been affected. Both sides and the whole body, indeed, were eventually affected with convulsive agitation, and the head at the same time drawn backwards. On the subsidence of one of these attacks he gradually sunk.

Note of the Post-mortem Appearances, by Dr. Todd, of King's College.

The scalp was pale and bloodless, like the rest of the body, which was much emaciated; the dura mater healthy. The vessels on the superficies of the brain were turgid with dark blood, but there was no subarachnoid effusion. The arachnoid cavity was natural. On the surface of the right hemisphere of the brain, under both the arachnoid and pia mater, there was a deposit of tubercular matter, disposed in patches of irregular shape and size, but the whole occupying a surface of about two inches square. The deposit was most abundant on the surface of the convolutions, but it nevertheless descended into the sulci between them; a circumstance which proved its connection with the deep surface of the pia mater. The cortical substance of the brain in contact with the tubercular matter was reddened and greatly softened, and on microscopic examination evinced a nearly total destruction of the tubules in it, a great enlargement of the proper globules of the grey matter, and of the pigment granules which adhere to them. The softening extended a slight way into the subjacent white matter. On the edge of the left hemisphere, corresponding to the diseased patch on the right, a slight tubercular deposit had taken place in a similar manner, producing a red softening of the grey matter in contact, but not occupying more than a half inch square in surface. The ventricles contained more water than natural, about double, and did not collapse when laid open. The cerebral substance throughout, excepting at the diseased parts, was firmer than usual at the patient's age.

Mr. Dunn was of opinion that the fall which he had had operated as an exciting cause in setting up diseased action about the tubercular deposit, and that the local affection, the simple twitching of the hand and jerking of the arm, was the consequence of the local membranous irritation thus induced. Irritation of the membranes and cineritious substance of the brain he believed to be attended with convulsions, without decided or persistent paralysis, and that it requires the medullary matter to be involved to render the paralysis permanent. Admitting that red softening of the brain is the result of chronic inflammation of its substance persistent paralysis in the present case was not to be expected, until the inflammatory action had involved the medullary substance. In briefly adverting to the phrenological bearing of the case, Mr. Dunn considered phrenology not in the light of a system of psychology, but of an attempt to elucidate the physiology of the brain, and that it was a duty incumbent upon the medical inquirer to avail himself of every opportunity of bringing its pretensions to the test of experience; and that it was to post-mortem examinations of the brain, and to pathological investigation, more than to any other source, that we are to look for evidence in support or refutation of its dogmata. In the present instance the parents of the child, who know

* We give the abstract of this case as prepared by the Secretary of the Medical and Chirurgical Society.

nothing of phrenology, had been forcibly struck with a change in the disposition of the child, which they had observed for some months previous to the child's illness to have been gradually taking place. From being a happy, placid, docile boy, he had become more and more petulant, self-willed, and obstinate. On the post-mortem inspection of the brain, the tubercular deposit was found to be situated on that part of each of the hemispheres where Gall and Spurzheim have located the organ of firmness. Among the first of morbid effects arising from the tubercular deposit would be an irritating excitement in the grey substance, which would lead to an abnormal development of its functional power. Now, obstinacy is an abuse of firmness, and if we associate the change of disposition which had taken place in the child with the structural disturbance induced by the tubercular deposit, the case might be fairly adduced in support of the hypothesis of Gall and Spurzheim, and of the locality which they have assigned as the site of the organ of firmness.

TO CORRESPONDENTS.

Vital Periodicity.—Thanks to the astute generalship of a (double d—d*) medical veteran, we have been inundated with a shoal of letters on this subject—enough, if we were Dr. Laycock, or were not a model of patience, to put, as the papers say, “a period” to our own “vital existence.” Mr. Macpherson Adams, of Bedford-square, opens the cry on poor Dr. Laycock, charging him with pilfering the doctrine, which he laid down to the British Association, from Dr. Dickson; and intimating an opinion, that “the medical world were now yielding to the opinion of the public in favour of Dr. Dickson's system, when that opinion is now beyond their control; like a bark at sea, and that can no longer face the gale, they, the faculty, (playing the part of the sailors) kindly consent to go with the wind and current which they can no longer oppose.”—A Lover of Fair Play (in an apparently feigned hand) compares Dr. L.'s attempt to Dr. Holland's, declaring both to be instances of piracy, of Dr. Dickson's doctrine.—Simplex comes next, and with characteristic qualityship (to use a Germanism) asks from whom he is to take the doctrine of vital periodicity, Dr. Dickson or Dr. Laycock, quoting, with approbation, Sir Astley Cooper's phrase, “that he would take a good doctrine from any one.”—“A Man with his Eyes Open”—now follows and pitches into “the pirate” with a mixture of eager pugilism and calm philosophy truly delightful.—J. J. A., A Constant Reader, T. G. H., A. Z., and a host of correspondents, who among them have placed the whole alphabet three or four times under contribution to furnish the various combinations proving the initials of their names, are flanked by a gentler correspondent, who subscribes herself “A Lady,” and presses upon poor Dr. Laycock with the whole weight of her feminine severity. But what are we to conclude from all this and all else we know on the subject? Just this: first, that Dr. Dickson has several ardent friends, converts to this doctrine of vital periodicity. Secondly, That whoever preceded Dr. Dickson, Dr. Dickson long preceded Drs. Holland and Laycock in publishing the doctrine in England, and that having done much to revive and propagate it,—he was fairly entitled to some notice by more recent writers adopting his views on so important a subject. Though not informed on the matter, we may add that we think it not at all improbable, from what we know of Dr. Laycock, that he made mention of Dr. Dickson's opinions in his paper to the Association. Our report certainly shows nothing to the contrary.

“An anxious Student,” &c.—Attendance on Hospital Practice will be recognised by the College, although he has only just entered to lectures;

* As Byron says—

“We wish not to be coarse,
But that's the cognomen, to say no worse.”

but we think he has commenced at the wrong end, as hospital attendance should expire with the last course of lectures. (This answer has been mislaid and delayed some time).

A Subscriber.—The Jury can return a verdict (and more is the pity) in a case of sudden death without having medical evidence, and coroners can give verbal requests to medical men to attend inquests, without asking their testimony, or paying their expenses (teste sæpe, Mr. Wakley); and there is no law (that we know of) to prevent the public being excluded from coroners' inquests, and medical men may decline attendance when only verbally requested to attend.

Mr. Dawson's letter has been sent.

The paper of Dr. Davy (Hanwell) on Insanity, in connexion with Phrenology, and our continued report of the Sitzings of the Phrenological Society, we hope to give next week.

Dr. Elliotson's remarkable case of the cure of Epilepsy and Palsy by Mesmerism; Dr. Clay on the treatment of Diabetes; A Correspondent on Dr. Conolly's Lectures at the Hanwell Asylum, Mr. J. E. Boyton on Iodide of Potassium, with the lecture of Dr. Squaffern's on Chemistry, and Dr. C. J. B. Williams on the Theory and Practice of Medicine, in our next.

A. E. has our best thanks.

Received.—A Constant Reader, Hulme; T. H. B., York; Beta; Mr. Harris; J. P. E.; An Old Soldier; Dr. S., Edinburgh.

Orfila's course, which we commence this week, consists of seven lectures. We shall give them fortnightly.

** Our Subscribers are informed, that the rule is to pay in advance. There are several subscriptions which (expected for some time) have not yet reached us.

THE MEDICAL TIMES.

SATURDAY, JULY 16, 1842.

Quid nos dura refugimus
Ætas? Quid intactum nefasti liquimus?

If a person well acquainted with London were desired to name its most unhealthy neighbourhood, he would inevitably fix on that of Clare Market. Flanked by Drury Lane, with its two grave-yards impacted to the very surface with the dead; Enon Chapel, that concentrated repertory of human corruption, on the spot, a building composed of a kind of loft, dedicated to the worship of God, and a species of store-room (consecrated to Mammon) separated from the upper part by a thin, unlathed, unplastered flooring, and which is not completely crammed with buried carcasses to the ceiling, throughout its whole extent, only because a common sewer “holds divided empire,” and necessarily occupies a portion of its space;—a little lower to the south, the Alms-houses' grave-yard, filled, till the coffins may be unbared by a summer shower;—a little to the east the Old Portugal-street burial-plot, whose unimaginable horrors we shall attempt to give some conception of by-and-by—slaughter-houses—offal-shops—labyrinths of miserable alleys, crooked lanes, and human piggeries, in countless numbers around,—such is Clare Market—a plague-breeding nucleus of filthiness and putridity, which the most pressed man of business will go a mile round to avoid. Yet—will it be believed?—an old building in this spot, in one of its very worst corners, walling and overhanging in its whole length one of its

most horrible and closely-packed grave-yards—a yard which (the third of an acre in extent) has been receiving, time out of mind, five or six hundred corpses annually—yes! an old building here have the wise, and, we suppose, disinterested managers of the King's College, fixed on for their Hospital!—passing by the ten thousand plots that lay open to them in the twenty or thirty miles' circumference of London, to place in this salubrious region that asylum for the infirm and sick which the munificent charity of our worthy countrymen enabled them to establish!

Verily this King's College Hospital has long stunk in our nostrils; and now that Parliament, in the Report of its Committee on Intra-mural Sepulture, has supplied us with the facts we wanted in an irrefragable form, if we do not abate the nuisance, and teach the gentry of King's College that their charter, whatever other things it may justify, will cover no insolent violation of public decency like this, the fault, we pledge ourselves, shall not be ours.

To our minds there is something inexpressibly repulsive, and leading to the most erroneous and horrible impressions in the popular mind, in this contiguity—this close attachment—of a hospital and well-packed burial-ground. The association obviously presents the two in the very aspect in which they never should be thought of, either as cause and effect, or at least as inseparable companions and important auxiliaries. The little plot of ground which connected with any other establishment or house would be a garden or exercise-ground, is attached to a hospital, and is a well-filled grave-yard! What must be the conclusions, the suspicions that originate in such a thought? What an adjunct—how necessary—how full of meaning will the grave-yard be thought to hospital practice? What a resistless incentive to confidence in doctors! and what a refreshing—what an exhilarating prospect for the patients, who, uncertain of their doom, crawl in a moment of restlessness or tedium to enjoy a view from the window! Verily, the timid patient who values life, and the medical man who prizes the good name of his profession, owe a deep debt of gratitude to the managers of King's College!

If our readers feel any curiosity about the spectacles which this Elysian plot occasionally furnishes for the comfort and cheerful encouragement of the hospital inmates, who are located on its side, we are enabled to inform them from the most indubitable authorities. John Eyles, the grave-digger, tells the committee that the dead are buried six inches from the surface. On one occasion, a grave—opened of course, before the last tenant was completely decayed—gave out such a smell “of brimstone or some sulphury stuff (sulphuretted hydrogen), that his sensation was taken away and he dropped on the

boards." Michael Pye, another grave-digger, describes the state still more explicitly. "The ground, he says, in Portugal Street is full, and frequently in getting a grave I have been compelled to cut away coffins about five feet underground; in some part of the ground I can positively say that there is not above *three* feet to the outside extremity but what it is full top to three feet from the surface." Asked whether the coffins resisting were fresh or not, he answers "Yes! We have been ordered by the sexton so to do (to hack up the fresh corpses) to make room," and he adds, that when the diggers declared there was no room for more, the answer was a curse, and an assurance that they must make room or quit! Mr. Ainsworth, M.P., tells us:—

As far as we could ascertain from those who reside in the neighbourhood of Portugal-street burying-ground, the odour arising from that ground, as well as others, when the weather was warm, or when much rain had fallen, was extremely offensive, and consequently prejudicial to the health of those residing in the neighbourhood. The smallness of the surface, and the situation in which it is placed in the midst of so dense a population, struck me as objectionable, and particularly the ground in Russell-court. I perceived a hole in the ground, and I was informed that the hole had been bored into a coffin in order to allow the gaseous matter to escape; and that that was very frequently done in St. Martin's."

James Michael Lane, a cane-worker, living in the neighbourhood, after telling us that the grave-diggers continue to bury one, two, and sometimes three corpses a day in this very limited spot, says, in answer to the question—

"What is the mode of interment practised?—Digging a shallow grave at times, and then a few weeks afterwards they will go a good depth. There was one occasion when my wife noticed it more than at any other time; there was a corpse buried on a Sunday from the hospital; there were two females following it; what made us take particular notice of it was, that they came from the hospital, and went out at the gate across the ground towards Clare-market, and then came back again to the hospital. In the course of about a month afterwards they opened this grave again, and when they opened it they brought the coffin up in pieces, not split, but the sides were taken from the head and foot board; they brought it up without splitting, just as you might take a case to pieces, or the lid off a box. After they had brought up the lid, and laid it on the ground, they brought up the bones with the flesh hanging in tatters upon it, then about four shovels full of soft substance came up, and my wife called to the person in the next room to witness the thing; they called out to the men; the men made them no answer, but turned their backs towards the houses to try to avoid the people seeing it, but the window being high, we could see every thing that came out of the grave as plainly almost as if we had been close to them; they were not far off. At another time a body was brought out of King's College Hospital, and it was put down without any service over it. I do not know what was the reason of that."

In answer to the question, is there any bad smell, his answer is, "very bad in the hot weather," and adds, "the hospital is

on one side, Portugal Street on another, the house I live in on another, and a slaughter-house on the other!" Poor inmates of the hospital! Lane's description of some other of the grave-diggers' practices, (beautiful music in the ears of the poor hospital patients!) is truly startling. Mr. Mackinnon asks:—

"Did you hear a *knocking* or *breaking open* of the coffins every morning before daylight, or how often?—I have seen it very frequently; they do not use a pickaxe, but they have got a tool, like the face of a hammer at one end, with a sharp point, which comes down tapering at the other end; it is about nine pounds in weight; that is what they use to break the coffins.

That is a more handy instrument?—It is so.

Who is it does this work?—The grave-diggers; there are generally two of them work together.

Did they do this to make more space in this yard, which is already full, or merely for the wood of the coffins?—To make space to put the dead in, I should suspect; because many times I have witnessed it, and so has my wife at the same time. We have remarked a particular spot, and we have said, 'We shall see whether that is disturbed;' we have looked out of window, and when they have dug the grave, it has been the top coffin; and in the course of a fortnight or three weeks we have seen them dig a deep grave. What could have become of that coffin, if they did not disturb the bodies?

What became of the contents of the coffin do you suppose?—It is mixed with the mould. This body, which was brought up piece-meal, with the flesh hanging to the bones, and stuff brought up in shovels without bones, was let down in a solid lump again on the top of the coffin; and the women called out to the men, and told them they had better take people's money out of their pockets, and not bury the dead at all, or bury them without a coffin. It is a shocking place for disturbing the dead."

But we must condense, or we shall fill our Journal, without exhausting the facts evidencing the immense horrors of this small burial-ground. When we remember that the yard is less than the third of an acre—when we know that two or more grave-diggers are constantly employed in admitting daily fresh comers—when we know that the place has been a grave-yard for centuries—that many hundreds have been every year interred, and that there has been no cessation for a day—all the facts illustrative of the mere *effects* of this state of things—horrible and disgusting as they are—are as natural as that death follows war, and putrefaction death. What is there, for example, wonderful that regular grave-diggers will not work* in such a yard—"it has so bad a character,"† that persons rapidly passing by the ground complain of its "stench"—that the ground smokes and reeks with animal exhalations on a summer morning "as if there had been hot-water poured on it"‡—that typhoid fevers are common all around, but particularly common and fatal among the poor people, whose windows, like the hospital inmates', directly overhang the yard?|| All this is natural enough—the

wonder—the mystery is, why the managers of King's College Hospital should have carefully selected such a spot as the site of an asylum for the infirm and sick confided by a liberal public to their care, and then have the effrontery to justify the selection by giving the lie to all that experience *demonstrates* of the connection of typhoid fevers and malignant maladies with putrid animal miasma, declaring that no "inconvenience" has arisen from the contiguity of the grave-yard, that on the contrary, "the burial ground is the source of the hospitals enjoying the great advantage of a *good* and a *large volume* of air!" and that the *SITUATION* of the Hospital (is such effrontery credible?) is the "VERY BEST TITLE TO ITS SUPPORT!" Bad as it is, we must certainly, after this, believe it at least a better title than that presented by the good sense or honesty (which they will) of the choosers!

We have this week broken ground; in our next number we shall have something more to say to the gentlemen of King's College. However small our effect on them immediately, there are those of some importance to them who will not be uninfluenced, and who will teach them—if there be not a speedy remedy—that our words on this matter are *things*. There are some abominations, raised and maintained by reckless cupidity, for which, happily, public attention and utter annihilation are identical.

"I should wish, as strenuously as you do, Mr. Editor, to see quackery extinguished; and would admire greatly the talent of that lawyer or legislator who could form a Bill to accomplish this great object."—MR. CARMICHAEL, (*Medical Times*.)

WE know of four ways proposed for the suppression of Quackery. The first is that of Sir James Graham and the Laissez-faire Gentlemen, and which offers a reasonable chance of success when the world shall be fool-less, and quacks diffident and modest. The second is that of Mr. Hawes, and of some eager fiat-justitia politicians: viz., fine and imprisonment for all unqualified practice, which may be accompanied by remuneration. The third is the German plan, which the Druggists richly deserve for their manifold sins, viz., that they should be allowed to retail no drastics, emetics, diuretics, or emenagogues, except by direction of a medical practitioner. The fourth is our own—the one propounded in our last number—and which strongly intrinsically supported by *insic* arguments, is, we hope to show, still more strongly recommended by the inherent and essential defects of all other plans.

Sir James Graham's plan is but another name for the present state of things. Quacks, we are told, shall not recover their practice debts by agency of law. Can they now? Can or *shall* the qualified Physicians? So that we have here much Parliamentary pother and no doing; the whole result of an Act of Parliament being, that Quacks will be in the same distin-

* See Report, p. 56. † Ibid. p. 109. ‡ Ibid. p. 5. || Ibid. pp. 5 and 6

guishing situation as our highest Physicians. The whole dispute, therefore, between Sir James Graham and ourselves, depends on the answer Reason gives to the interrogatory—Shall Empiricism be left untouched? or in other words, shall a public dishonesty, in which, not only property, but health and life is involved, be legalised? We shall not stop to argue a question of such obvious and easy solution. Sir James Graham and his friends, by *meddling* with the matter, admit the necessity of interference. The mischief is, that while their peddling Legislation draws attention to the facility and profits of Quackery, it really does nothing to deter unprincipled men from its practice.

Mr. Hawes's plan, as we argued last week, fails, because whatever abstract good it possesses, it is utterly deficient in applicability to time, persons, and things. It allows a Druggist to sell whatever is directly asked from him, but levies a penalty on him if he expresses an opinion on its merits. Let us suppose, therefore, a poor customer, explaining his ailment to the Druggist, and asking for a proper dose of an unsuitable, or improper dose of a suitable medicine. Does the Druggist comply to the letter with his command? he does the man a fatal injury, but pockets the charge under the protection of law. Does he point out the man's error, and recommend as a substitute a proper dose, or a better remedy? he is fined and imprisoned. Now we will not say a word on the justice of such a law, with such consequences: but we ask, would the people bear it? Would not a resisting Druggist, under such circumstances, have the tide of public sympathy in his favour? Would not his own body—would not the public press—would not the class of people in the same rank with the patient—would not the jury be with him? Such a law—we say it deliberately—can never be enforced in England.

The German system, though not less strict—nay, stricter—seems far more feasible; for it avoids many of those anomalous consequences which clash with the feelings—we may say—the common sense of the English people. It meets the evil in an earlier stage (far more completely too), and no special consequences could be pleaded by the Druggist to attach public sympathy, or throw discredit on the operation of the law. The special circumstances of the case would be nothing—the general law everything. Inclined, however, as we are to this severe system, from the multiplied miseries inflicted on humanity by the universal, and we cannot help adding, *insolent* mala-praxis of the body of Druggists, it is impossible to disguise from ourselves the fact, that whatever case there might be in punishing breaches of the law, there would be the greatest, if not insuperable difficulty in reference to its general enforcement. The inconveniences attending the enforcement, would be little short of a social evil, in a country

to which, in its internal commerce, at least, entire freedom is as primary a necessity as the air it breathes, and we are far from being certain that our countrymen, even when deliberately reasoning on it in their counting-houses, would not think that the additional expenditure of time and money it necessarily led to, would not more than counterbalance the immense saving it would effect in human suffering, and the improvement that would arise from it in the general prolongation of human life. Passing, therefore, these three real or nominal modes of prevention, we think we are entitled to say, that our plan is the only one which, while practically suppressing not only Druggists' practice, but all other kinds of Quackery, steers clear of so many and such fatal objections. We leave the Druggists in perfect freedom: we touch not that of the community; but we provide an easy, prompt, certain, and *popular* punishment for every *abuse* of the privilege. We remove the great encourager of Quackery, ignorance, by teaching the people the precise character of the men they have to deal with; we directly stigmatise and direct public reprobation to men, whose ignorant unprincipledness sacrifices human health and life to their cupidity; arrange matters so as to shame them, if possible, from their nefarious practices; and we have the whole machinery of law in active operation for punishment, the moment that any evil plainly follows, or even accompanies them.

We conclude with Horace:—

Si quid novisti rectius isto
Candidus imperti: si non hoc utere mecum.

EPIDEMIC JAUNDICE.

(For the 'Medical Times.')

JAUNDICE, though repeatedly noticed by the Father of Physic, as occurring at particular seasons of the year, and in certain circumstances,* has not been frequently noticed by the moderns as occurring in what may be strictly called an *epidemic* form; and in the British Medical Journals that I have had an opportunity of perusing, one solitary example only occurs, in the "Memorie della Societa Medica, di Emulazione, di Genova," vol. i, as given in the *Edinburgh Medical and Surgical Journal*.† This the late learned editor notices, as a "curious epidemic," without, however, any remark that would lead the reader to infer that the disease had in this form previously attracted his notice. And in Systematic treatises, I can find only one incidental notice, by Dr. Mason Good,‡ of an epidemic jaundice occurring at Göttingen, as described by Herliz. The year when this occurred is not given. Elsewhere, the learned author speaks of biliary jaundice being "most generally found in Autumn," but without any reference to the disease, as occurring in a shape entitling it to the name of an epidemic. For these reasons, therefore, I make no apology for the following brief sketch, with such statistical information, derived from long personal residence and ob-

servation, as may assist in forming an estimate of this apparently rare epidemical disease, and of the causes which gave rise to it.

Kinross-shire is situated between 3 deg. 14 min. and 3 deg. 35 min. west longitude, and between 56 deg. 9 min. and 56, north latitude. From the eastmost point to the westmost part it does not exceed twelve miles in extent; and from north to south is scarcely ten. It is bounded on the north by the Ochil hills; on the east by the Lomond hills. Benarty and the hill of Cleish divide this county on the south, and southeast from Fifeshire. Though the boundaries are thus generally hilly, there is level ground on at least three of their sides.

The greater part of this small territory is gravelly, intermingled here and there with portions of clayey loam, moor ground, and moss; the general basis is red sandstone. The climate, though generally cold and wet, has been much improved of late years by drainage, and is, upon the whole, considered healthy. Lochleven, famed for its delicate trout, occupies a considerable portion of the eastern part of Kinross-shire, and is now, after the late Parliamentary drainage, about nine miles in circumference; the average depth about fifteen feet.

The parish of Portmoak, where the epidemical disease under notice occurred, is situated at the eastern extremity of Lochleven, and contains a population of 1,600 persons. It runs more than half round the lake, and gradually rises from it to the Lomond hill on the northeast, and to Benarty on the south. About the middle of the parish, and on the east and north bank of the lake, there is an extensive and deep moss, of nearly 300 acres, the greater part of which has been improved, and about 100 acres rendered fit for cropping, within the last seven years. To the east of this moss the soil is deep, moist, and level, consisting principally of *carse land*; and through this runs the only outlet of the lake, the water of Leven. During the prevalence of easterly winds, which are common, this *strath*, from the nature of the ground and situation, is almost invariably covered with a dense fog.

The inhabitants, consisting, for the greater part, of the poorer classes, principally occupy two villages, separated from each other about three-quarters of a mile, and situated but a little way from the above-mentioned moss. They have long been noticed for industry and frugality; and it may not be undeserving of a passing notice, that Michael Bruce, the author of "An Elegy written in Spring," in the immediate prospect of death, in his 21st year, was the son of one of these industrious peasants. Their ordinary food consists of oatmeal, cows' milk and potatoes, with tea and coffee, and as most keep a pig, a moderate portion of animal food; and, indeed, there are few places in Scotland where the poor live so comfortably. About 400 of the whole population are hand-loom weavers; the remainder who are fit for work are occupied in out-door labour.

In the recollection of old persons agues were common, and regularly expected in the autumnal months; but these have now disappeared. During the epidemic cholera, which some years ago ravaged many places in Scotland and England, this disease was almost entirely unknown here.

In the summer and autumn of 1840, it may not be improper to mention, an epidemic biliary fever, with, in some cases, subacute inflammation, and congestion in the right hypochondriac region, was prevalent, but exclusively confined to Kinross, situated close on the west bank of Lochleven, and distant, in a straight line, rather more than three miles, from Portmoak. The first cases of fever occurred, almost

* Hippocrates on Air, Water, and Situation, and upon Epidemic Diseases: Clifton's Translation (1734), pp. 128, 129.

† Vol. i. p. 107.

‡ Study of Medicine, edit. 1825, p. 396.

simultaneously, during very hot weather in the end of April and beginning of May, previous to which the weather had been irregular and cold;* and it is recorded that the thermometer, having, towards the middle of May, suddenly sunk from an average of 65 deg. 70 to under 40 deg. of Fahrenheit, (with snow on the adjacent hills,) many swallows were found dead in clusters. The fever after this prevailed for nearly five months, or towards the end of September; but in no instance out of more than eighty cases, did jaundice occur.

The succeeding autumn, above referred to, and winter, were marked by considerable vicissitudes, wind very frequently north-east and south-west; and scarlatina and measles, along with hooping-cough, were prevalent. The same remarks apply, though in a less degree, to the spring and summer of 1841; and during the succeeding autumn, after much broken weather, the harvest was, as is but too well known over the United Kingdom, remarkable for its duration and lateness, from the heavy rains that prevailed. In August alone the rain-gauge, or ombrometer, showed a fall of six inches; while the mean average quantity is here only two inches in the same period.

Immediately after this, and during the continued wet weather, in September (1841), the first cases of jaundice occurred in the lower parts of the most easterly of the two villages (in Portmoak parish) above referred to; they were confined, at first, exclusively to this locality; and from this period, to the months of March and during part of April, about forty cases occurred in a population of 450 persons: of these the most were adults, the males and females being in nearly equal proportions. In one family, four children were seized, but not simultaneously; and this was one of the very few instances where more than one case occurred, in succession, in the same dwelling.

Those employed at work out of doors and in the house were equally attacked.

In the westerly and more elevated village the disease did not appear till towards the end of December and beginning of 1842; and in a population of about 600 persons twelve cases occurred from this period to the end of April. In the surrounding and more scattered population, throughout all parts of the parish, including a small part of Fifeshire, the exact numbers have not been so precisely ascertained, as many did not ask for medical aid; but from personal observation, and information obtained from competent persons, these could not be fewer in number than twenty—forming, with the other cases, a sum-total of 70, in a population (including a small part of Fife, as above,) of 1,700 persons of all ages.

The duration of the disease and mode of attack were various. In some, sallowness of complexion, preceded by yellowness of the skin for several days, was the first symptom. In others, tension in the region of the stomach, and a sense of fulness in the right hypochondrium, with slight pain extending to the shoulder; the pain in the side was not, however, uniform, nor in any severe. In most cases slight signs were followed by a restlessness, and loathing of food, for ten or fourteen days, before the skin and eyes were tinged with yellow; and this discolouration generally lasted a week, though sometimes for a longer period; in slighter cases, for four or five days. The stools were generally clay-coloured, and the urine, in all, tinged the lincn. Except in a few of the severer cases, the accompanying fever was slight, and many while under treatment, though languid, continued to move about. In a few of the severer adult cases, a discolouration, or sallowness

of the skin, remained for several weeks after the attack. In one case only, where well-marked organic disease of the liver was ascertained, the issue was fatal. In most cases itchininess of the skin was not a prominent feature.

Of the mode of treatment followed little need be said; and calomel, with occasional doses of castor oil, or senna, were the remedies employed.

The previous sketch of the state of the weather, and of the peculiar locality of Portmoak parish, renders it unnecessary I should remark on the probable causes of the epidemic, which in many of its features, and making allowance for the influence of climate, will be found to correspond with the epidemic at Genoa, formerly noticed. "As to the manner of diseases, upon inquiry it will be found that some are born with us; others proceed from the country we inhabit (for they are common to many, as almost everybody knows); others from the body and the way of living; others from the constitution of the weather in general; and others from particular seasons."* On the *modus operandi* of these it is unnecessary here to enter.

ROBERT ANNAN, Surgeon.

P.S.—Since writing the above, I have learnt that two or three additional cases were observed in June of the present year; these were confined to the west and north-east parts of the district.

Kinross, July 5, 1842.

MEDICAL SECTION OF THE BRITISH ASSOCIATION.

To the Editor of the 'Medical Times.'

SIR,—In your report, under the above head, inserted in the last number of your Journal, I find the following passage:—"A very lengthened communication from Dr. Laycock, on *Vital Periodicity*, was read by the Secretary (Dr. Sargent) in which a vast number of facts were related establishing *periodicity* not only in diseases, but in sound health; and not only in man, but in the lower order of animals. Such facts had been noticed very particularly by the ancient writers on medicine—Hippocrates, Celsus, &c., which led to the establishment of critical days in the treatment of various diseases, often rendering their prognostications very certain. Indeed, Dr. Laycock stated—that in many instances certain *periodic* changes took place in health as well as disease, establishing the same law, that he (Dr. L.) felt little doubt that the time of birth had reference to the time of death."—Whether or not the facts in question bear out Dr. Laycock in this last proposition—a proposition I have taken the liberty to place in *italics*—I am not in a condition to determine; but it is highly gratifying to me to find that the *periodical doctrine of all animal life*, whether in health or disease, is now beginning to claim the attention of the leaders of the profession, after having, for so many years since its discovery by me, been assailed and cried down at their hands! In the second edition of the 'Fallacies of the Faculty' (a copy of which accompanies this letter) will be found, not only the whole doctrine of *Vital Periodicity* (i. e. the intermittent and periodic nature of every animal movement), but a new doctrine of the mode in which it may be turned to account in the treatment of all human disorders. At home, the *chronothermal system of medicine* is already widely appreciated; in the country it is openly embraced by numerous members of the medical profession; in London, too, it has its supporters—among others, one

or two eminent practitioners, who, by a side-wind, have attempted to *pirate* it! To our continental neighbours, the French, it is under obligations; they have done its author the honour to translate his work into their language, with a laudatory acknowledgment of its value to the world.—I am, Sir, your most obedient servant,

S. DICKSON.

Clarges Street, July 8, 1842.

MEDICAL REFORM.

To the Editor of the 'Medical Times.'

SIR,—Medical Reform is a subject on which not a few look, but with the extreme of terror and alarm, because it points to the overturn, nay, the total destruction of many a well-favoured, though not the less injurious custom, which age, and not the benefit which is or has been derived from its continuance, is its sole and poor recommendation. Such sick-hearted individuals will tell you the oft-told tale, of the danger of meddling with old-established rules, howsoever injurious these may be; not, however, because the danger is altogether to be apprehended from the attacking of the system itself, but also from the fear of the wrath of those who are more or less interested in upholding the stability of such ancient practices; and perhaps they will add, that the evil of such an interference will more than counterbalance in effect the pernicious results which of necessity followed the former practice. Now, Sir, this sort of argument is plausible enough in some questions—political, for instance, where it sometimes happens that something must be sacrificed to prevent the operation of a greater evil; but no right-thinking man will ever allow this expediency to have any weight in a question of such magnitude as the present, especially when it is remembered that it involves the interests of the great mass of mankind in general. The time, I hope, is past when matter of this nature is to be overlooked for the sake of any under-hand influence. The object of Medical Reform is philanthropic in the highest degree, and any excuse of this kind can only be translated into a tacit opposition to the cause, and another name for disinclination to act in its behalf. Judging from the past history of others, opposition must be expected to be exercised against this and all questions of a similar nature; but we have only to look to its justice, morality, and necessity, and according to the amount of these which pervades the whole, so just in the same ratio may we calculate upon our success in overthrowing and trampling under foot every obstacle which appears. Now-a-days, if ever we hope that our efforts in a great national and moral labour shall be crowned with success, we must look all kinds of opposition boldly, fairly, and fearlessly in the face, and we must fight for ourselves; for it is evident to all, that if we wait the pleasure of those in high places over us, we may have to wait long enough, and perhaps, at the end, be as far from our object as when we at first set out. The question of the subject of this letter is philanthropic in the highest degree; and for as often as it has been brought under notice, it has never received that attention which its importance obviously merits. No one can doubt but that it is as interesting and benevolent a subject as can well attract the attention of any legislature; but strange to say, interesting and benevolent as it is, when it is brought into review it is treated by some with contempt, and by the great majority with the coolest indifference. Ought this to be endured? We are a respectable, numerous, and influential body; and if we see that we cannot produce a conviction in the public mind of the sincerity of our intentions by lenient mea-

* See MEDICAL TIMES for July 4, 1840.

* Hippocrates, *ut supra*.

asures, we ought, as men determined to have justice done to them, to put more formidable means into immediate operation. Petitions ought to be sent up from every town of any consequence in the kingdom to both Houses of Parliament, explaining our grievances, exposing the flagrant iniquity and injustice of the present system, and at the same time offering a Bill for consideration which had previously received the assent of the majority of the medical profession, who would declare it to be a fit remedy for all the existing evils. There could be no fear but that those petitions would be numerous, signed, for it would only require a faithful and clear statement of our motives to be laid before the public to ensure their ardent assistance and cooperation. Moreover, the medical profession, *en masse*, should send a general petition, also declaring that they cannot allow their liberties and privileges to be thus trifled with. None who have the interest of our profession at heart ought to remain longer inactive. Delay is dangerous. Petition! ought to be the watchword; and whilst our words and actions are temperate, they ought not to be wanting in firmness and zeal, because by this means, and this means alone, will we be able to bring our legislators to give the whole matter the consideration which its magnitude requires. A move—a strong move, and a move altogether, only is wanting to crown our labours in this great work with triumphant success. Evil has generated evil, and one bad habit has crept in after another, until the whole is now an obnoxious leaven of impurity and injustice. To remove these completely and entirely, leaf and branch, is the object of Medical Reform; and no man who is capable of deciding between right and wrong can be at a loss to decide with whom he ought to cooperate—with those selfish individuals, who work, and fight, and wallow for their own aggrandizement, and whose sole guide is base, sordid, heartless avarice; or with those, whose only object is the respectability of the honourable profession to which they belong, and, above all, the welfare and happiness of their fellow-creatures.—I am, Sir, your very obedient servant,

THETA.

Edinburgh, June 25, 1842.

NEW MODE OF AMPUTATION.

IN a case of compound fracture of the right leg, which degenerated into a state of incurable ulceration, Mr. Thomas Green, of Bristol, performed the flap operation in the following novel manner:—A transverse incision having been made across the front of the leg, through the skin, another was made through the integument at the back of the limb, including a large portion of the calf, and leaving skin enough to cover the flap of muscle, which was next formed by passing the catlin through the leg a short distance behind the bones, and cutting out in the usual way; the remaining muscles were divided by a transverse incision passing between the bones, which were next sawn through and the arteries tied. Hæmorrhage still continued from a large vein, which it became necessary to secure by ligature. Three sutures and pieces of strapping were applied to keep the posterior flap in apposition. Cold cloths to be constantly applied to the stump, and to take immediately half a grain of acetate of morphia in a draught. The operation was performed on the 6th of February. On the 20th, we have this report:—The ligature only came away to-day, repeated gentle attempts having failed to bring it away previously; stump healed, and in good condition.

Mr. Green remarks:—The mode of operating employed in this case I first tried a few months

ago at St. Peter's Hospital, on a man named Morris, and found that by it all the inconveniences alluded to were avoided, for the man left the house with an exceedingly good stump, and now makes good use of his vocation as a sweeper of one of the crossings at Clifton. I shall now describe the operation as I performed it yesterday, and if you examine the limb removed, which lies on the table, you will easily understand its stages. An incision was made anteriorly across the fore part of the leg, in the usual situation, about two inches below the tuberosity of the tibia; it extended from the inner angle of that bone to a point behind the fibula; from the termination of this incision, on the inner side of the leg, the knife was carried downwards, to some extent, next across the limb posteriorly in a curved line, and brought up at the outer side, so as to unite with the front incision behind the fibula. In this manner a portion of integument was divided, which might be correctly described as representing two-thirds of an oval figure. This incision should go through the skin and subjacent tissue, down to the fascia covering the muscles; the contraction of the integument itself, with a trifling assistance, by drawing the skin upwards, leaving a separation of about half an inch between the edges of the incision. A long catlin was now pushed through the leg, about one-third of an inch behind the bones, and carried downwards, and next backwards, so as to make a flap of muscle, its edges corresponding with those of the retracted integument. The remaining muscles were next divided transversely; in this division are contained the large vessels and nerves, which are those cut transversely. The bones were separated, the sharp angle of the tibia was sawn off, and the arteries secured in the usual way. The flap, when brought up over the face of the stump, was entirely and abundantly covered by skin; three sutures were used, assisted by two broad pieces of strapping; a cloth wetted in cold water was applied over the stump, and the man removed. I prefer sutures in this operation, on account of the weight of the flap having a tendency to draw it down, and thus separate it from the anterior surface; these I always remove on the third day, and have not found any inconvenience from their use.

REVIEWS.

The Spas of Homburg, considered with reference to their Efficacy in the Treatment of Chronic Disease. By Sir A. M. DOWNIE, M.D., Physician in Ordinary to Her Royal Highness the late Landgravine of Hesse Homburg. London. 1842.

THE information which the medical practitioner can derive from the perusal of this 'Hand-book' or companion to the Spas of Homburg, is not very great. The book is addressed to the frequenters of watering-places and mineral wells, and cannot be viewed as a purely scientific work, yet the information imparted, so far as it goes, is correct. Germany has been long famed for its mineral springs; and those of Homburg, to which our author invites the attention of the public, though among the latest discovered, do not appear at all inferior in virtue to the most renowned of these wells. The principal spring here is the Elizabethan, an analysis of the water of which, by Liebig, is given in the Appendix, which shows that the spring is rich in various saline ingredients, particularly muriate of soda, carbonate of lime, and free carbonic acid. The medical effects of mineral waters, *per se*, have probably been overrated. The Spa doctors designate them a panacea for all the ills which flesh is heir to; while others have no great confidence in their efficacy in the cure of

serious diseases. When combined, as the use of the waters usually is, with change of air, scenery, diet, and mode of life, salutary effects are undoubtedly superinduced, though not attributable exclusively to the mineral waters. These waters are useful in chronic but not in acute diseases; and the diseases for the cure of which they can be most depended upon are morbid conditions of the alimentary canal and accessory glands, or dyspepsia in all its forms; cutaneous diseases; and the rheumatic and gouty diatheses. In the cure of these complaints we cannot tell how much is attributable to the saline ingredients, and how much to the water, or if any effect arises from the extreme subdivisions of the saline matter, as existing in the water. We are inclined to think that mineral waters, when taken internally, may act in two ways in improving the health. First, by its mechanical action on the alimentary canal, as it acts upon the skin when applied externally; and secondly, and more particularly, by being absorbed from the alimentary canal, and carried into the blood, and affecting thus not only the composition of the blood, but likewise all the secretions. On this principle alone can we explain the deobstruent effects of these waters upon the liver and kidney. In cutaneous diseases the use of the waters, in the form of the bath, is also indicated; and in affections of the joints the bath, with friction of the joints affected, will be found serviceable. Upon the whole, we recommend the work before us, as an interesting introduction to the scenery as well as to the spas of Homburg.

On the Comparative Advantages of Lithotomy and Lithotripsy. By EDWIN LEE, M.R.C.S. London: Churchill.

THIS dissertation, to which the Jacksonian prize was awarded, was formerly published in the 'Edinburgh Medical and Surgical Journal.' The subject, which is of no small importance, is discussed with temper and judgment, and the various conditions under which the operations respectively are proper or contra-indicated, are adduced in a lucid and forcible manner. The comparative advantages of the two operations may be viewed in reference to *individual* cases, or the subject may be considered upon more *general* or *abstract* grounds, as the comparative pain, facility of execution, and safety of the two operations. The question, indeed, resolves itself into the following three particulars, all of which are not, however, of equal importance. The first element is *safety*; the second, the *degree of pain*; and the last, the *simplicity* of the operation. Let us glance at the subject in reference to these points. From statistical inquiries, the average mortality after the operation of lithotomy, in England, is less than one in seven; and on the continent of Europe, about one in 4 two-thirds. We have no statistical details of the results of lithotripsy on which we can rely; but the general impression is, that the mortality is not so great as either of the averages just mentioned: indeed, it is perfectly obvious, that if Lithotripsy had been as fatal as Lithotomy, it would have been already abandoned; but the increasing confidence with which Lithotripsy is viewed by the profession is tantamount to a proof, in the absence of other evidence, of its less fatal character. We are strongly impressed with the belief, that, as an operation, Lithotripsy, even as at present performed, is far less fatal than Lithotomy.

There can hardly be any doubt regarding the relative pain of the two operations. In Lithotripsy there is no tying up of the patient—no cutting: the instruments are carried along the natural outlets of the urine; and these passages, when irritable, can be trained to the

contact of the instruments without injury. Lithotomy, at best, is a bloody and agonizing operation. The knife has to be carried through a great variety of sensitive textures, and plunged into the vitals of the patient. The operation of Lithotomy may be performed without the abrasion even of the natural surfaces; and we have seen patients submit to the operation without a murmur, and immediately after, walk about as if no operation had been performed.

But the operation of Lithotomy is more difficult, it has been said, than that of Lithotripsy. This is unquestionably not the fact. To perform either operation properly a good deal of practice on the dead subject is required. Little more than the hands are required in Lithotripsy; but Lithotomy requires the exercise of the *head* as well as the *hands*. Indeed, Lithotomy is, in every sense of the term, the more formidable operation. It requires for its performance as much mechanical adroitness as the other, more knowledge of anatomy, and infinitely more firmness. We are inclined, from all these circumstances, to hail the introduction of Lithotripsy as an important achievement of Practical Surgery, and to anticipate the time, when from the combined effects of Mechanics and Chemistry, Lithotomy will be ranked among the things that were. This period, unfortunately, has not yet arrived; and we shall, therefore, in the mean time, be contented with the conclusions of our author, which evince a due degree of caution, and no want of discrimination. These conclusions are:—

1stly, That lithotomy is still, in the present state of the art, the operation most suited to the majority of cases of stone in the bladder; inasmuch as about one-half of the number of stone patients consist of children, to whom, with a few exceptions, it is more particularly adapted.

2ndly, That, as far as adults and elderly persons are concerned, lithotripsy is most applicable to an equal, if not the greater number of cases.

3rdly, Lithotripsy is preferable in the great majority of female patients.

4thly, Other circumstances being favourable, lithotripsy is more especially suited to calculi of small size, even when hard.

5thly, Lithotripsy is less applicable than lithotomy to most cases, where the bladder contains several calculi, especially if they be hard.

6thly, Lithotomy is the preferable, and often the only admissible operation, in cases of large calculi; as also in those cases where the stone, though only of moderate size, is yet of considerable density, and irregular on its surface, as in the oxalate of lime variety.

7thly, When there exists much irritability of the urethra and bladder, which cannot be allayed by preparatory treatment, lithotomy would be the preferable operation; especially if the irritability appeared to be chiefly dependent upon the presence of the stone.

8thly, Lithotripsy is applicable in some states of deranged health, or disease of parts, which would counterindicate lithotomy, or would render its performance most likely to be attended with failure.

9thly, The degree of pain from the performance of lithotripsy is not great in many cases, and is mostly diminished after the first sitting; but on the other hand, in some instances, the operation is very painful, and the pain becomes increased in subsequent sittings, though, perhaps, never so acute in lithotripsy as in lithotomy, yet, as the pain in the latter operation lasts only for a few minutes, whereas in the former it recurs, though less in degree, on each sitting, the patient frequently suffers by lithotripsy a greater amount of pain.

10thly, The duration of the treatment is generally longer by lithotripsy than by lithotomy, though sometimes it is shorter; and after the stone has been removed by the latter operation, the patient, though confined to his bed, may, during the greatest part of the period, be considered as convalescent; whereas, when lithotripsy is performed, there is always a risk, so long as any fragments remain in the bladder, of circumstances arising to prevent the com-

pletion of the operation, and the patient cannot be regarded as out of danger.

11thly, When lithotripsy is applicable, the method by pressure is, in the great majority of cases, infinitely superior to that by percussion.

12thly, Lithotripsy exposes more to the risk of a relapse than lithotomy, on account of the greater probability of a portion of stone having escaped detection, and remaining in the bladder after the operation.

Lastly, Sufficient data do not as yet exist whereon to form any accurate estimate of the average amount of failure and mortality after lithotripsy, the accounts hitherto furnished being of a very contradictory nature; some representing lithotripsy as more successful in its results than many slight operations; others stating the number of failures to be very great. The circumstance of several unsuccessful cases, which were not adverted to by the operators, having been subsequently brought to light, both in England and on the continent, tends very much to discredit some of the statements of success which have been made; though, as far as the results are concerned, much must depend upon the operators being accustomed to the use of the instruments, and knowing when to desist from persevering in the attempts; as also upon the selection of proper cases. It is, however, satisfactory to know, that, since the instruments have become more simple and perfect in their construction, and the operation better understood by the generality of practitioners, the proportion of failures is much less than at an earlier period.

MEDICAL MEMS. OF THE WEEK.

By PERISCOPICUS.

NATURAL ELECTRICAL PHENOMENA.—

By the agency of electricity many bodies can be rendered luminous. If a series of electric discharges be transmitted across fragments of chalk, sulphate of barytes, sugar, quartz, or succinic acid, they shine for some time after with a brilliant light. The Aurora Borealis, or Northern Lights, are clearly ascertained to be electrical phenomena; they are beautiful exhibitions of luminous objects. That they spring from an electric origin is proved incontestably by the fact that they disturb the magnetic horizontal needle; this has been established by the observations of Arago and others. Mr. Edward Cooper has lately been employed in making some very interesting investigations into the nature of shooting-stars, which lead to the conclusion that they are exclusively of electric origin. A very singular phenomenon has been occasionally observed at sea, the origin of which is also undoubtedly electric. In particular conditions of the atmosphere a lambent flame, of phosphoric hue, has been seen flickering about the mast-heads or extremities of some of the spars of a ship, to the great terror and astonishment of the crew. It has thus been described by an accurate observer:—"I looked forth and saw a pale, greenish, glow-worm-coloured flame, of the shape and size of the frosted glass-shade over the swinging-lamp in the gun-room. It drew out and flattened as the vessel pitched and rose again; and as she sheered about, it waived round the point that seemed to attract it, like a soap-sud bubble blown from a tobacco pipe before it is shaken into the air; at the core it was comparatively bright, but gradually faded into a halo." Major Bonnycastle, in his Canadian Tour, gives an account of a very singular electrical phenomenon observed by him upon the ocean. He says: "About two in the morning the mate roused all the sleepers in their hammocks, by calling loudly for the master to come on deck, as he observed a most unusual appearance on the lee-bow. The weather had been cold, but there was a clear, starry firmament, when in a moment the heavens became overcast to the southward, and an instantaneous

and intensely brilliant light, resembling a fiery aurora, shot out of the sea, and rendered everything minutely discernible, even to the mast head. The mate and his watch immediately put the helm down, calling up the whole crew, and awakened the captain; but before this was accomplished the light had spread more vividly than ever over the whole sea, and the waves, hitherto tranquil, became much agitated, while thick, dark clouds from the land seemed to threaten dreadful weather. The spectacle continued to increase in beauty; the whole sea, as far as could be seen, was at length one entire sheet of an awfully brilliant flame, above which shone along the base of the high, frowning, and dark land abreast of them, a long and magnificent line of fire. The fish, plentiful in these latitudes, and of a large size, seemed alarmed; long tortuous darting lines of light, in a contrary direction to the sea, showed immense numbers of large fish flying about as if they were lost. The wind, which had increased a little, had a peculiar hollow sound; and after a length of time passed in contemplating this splendid and extraordinary scene, day broke slowly, the sun rising very fiery and gloomily. To sail on a sea of fire," the writer observes, "is the only similitude I can fancy to this really awful scene. I have frequently seen the waters of the ocean on fire, as it is vulgarly termed; but then only in small masses, and no more to be compared to what we there witnessed than a November day, when the sun passes murkily through the fog of England, is to the bright and glorious appearance of that luminary on a fine day in the tropics."

CALCULUS.—Mr. Windsor, of Manchester, relates the following case:—Thos. Dodds, a middle-aged man, consulted him in September last, on account of a swelling of the right submaxillary gland. It had commenced, he said, about four or five years ago; was very small at first, slowly and gradually enlarging to its present size—that of a large walnut. It now projects somewhat below the jaw, and upwards into the mouth on the right side of the tongue, interfering with his mastication; there is also occasionally severe pain shooting through the tumour. His general health was tolerably good. The use of iodine and iodide of potassium internally, and the latter with camphor externally in the form of ointment, rubbed on the part affected every night, was prescribed.—20th, No change in the symptoms or appearance of the tumour.—Oct. 6th, He called on Mr. W. and showed him a calculus, which had passed into his mouth from the swelling under the tongue. Feeling uneasiness in his mouth, he had applied over the part a hot fig; and on examining, a few hours afterwards, he found something hard projecting, which he took hold of with his fingers and drew out. From this time the pain and soreness he had so long felt ceased, and the swelling greatly subsided.

RUPTURE OF THE SPLEEN.—A soldier, who had suffered several attacks of intermittent fever, was found dead, and was thought to have been murdered. In the examination of the body, the abdomen was observed to be swelled as in ascites, and a puncture gave vent to a large quantity of blood. The spleen was extraordinarily enlarged, and had assumed an oblong shape from above downwards, occupying all the left side of the abdomen, displacing the liver and stomach to the right. On its anterior surface was a fissure, two inches in length. The splenic vein was much dilated, the arteries of the spleen also much enlarged, especially in the neighbourhood of the fissure. The condition of the spleen was at this point truly aneurismal, and the mechanical engorgement which the organ had undergone was so great that rupture took place.

PROLAPSUS AND SEPARATION OF THE VAGINA.—A woman, 25 years of age, who laboured under some slight disorder, occasioned by errors of diet, took an emetic on the fourth day, which produced copious vomiting, and relieved her greatly. A few days afterwards she began to complain of burning pain during micturition, and had some discharge of blood from the vagina, with severe pain in the external organs of generation. On examination, the external parts were found in a state of gangrene; on the following day the patient complained of an unusual feeling about the parts, and it was found that the whole vagina was prolapsed; as it was impossible to return it, antiseptic remedies were merely applied. The exposed parts now sloughed, and were completely removed on division of a band which retained them superiorly. The fever and other symptoms quickly subsided; to prevent adhesion a piece of sponge, moistened with some aromatic decoction, was introduced into the vagina. The vaginal portion of the uterus now became adherent to the upper edge of the vagina, while the lower remained free; a new canal was formed, being merely somewhat shorter than the original vagina. The woman recovered perfectly, and the functions of the uterus were soon restored.

HYDROPATHIC TREATMENT OF FEVER.—Dr. Allnutt observes, that when the skin grows preternaturally hot in fever, the time for cold ablutions has arrived. A young woman lately came under his care labouring under typhoid fever, consequent upon synochus of long standing. She had been the tampered charge of a renowned homeopathist, and been dragged by decillionths into the jaws of the grave. He found the skin steadily hot without perspiring; aphthæ had formed about the tongue and lips, and there was transient delirium at night. After attending to the state of the bowels, he ordered cold applications to the heated surface, with immediate benefit. The delirium ceased, she regained her mental tranquillity, and awoke refreshed after each successful application.

NITRATE OF SILVER.—M. Dumeril employs a simple process for preserving the nitrate of silver from the injurious effects of exposure to air. It consists in merely coating the caustic with engraver's sealing-wax, which contains a large quantity of shellac. This wax adheres well, forms a strong and smooth varnish, as it were, which remains unaffected by the atmosphere. Thus the nitrate no longer stains the fingers, injures the caustic case, nor is in any way changed by the moisture in the air, possesses a greater degree of solidity, and the process is of exceeding service in practice, as when wanted for use, a small part only of the caustic need be uncovered by means of a penknife, so that its application can be restricted to the part where it is required. This is of peculiar utility in ulceration of the throat, aphthæ, fissures, &c.

ANCHYLOSIS OF THE TEMPORO-MAXILLARY ARTICULATIONS.—M. Payan, in examining the body of a man 75 years old, who died of Asiatic cholera, found so complete a union of the temporal and lower jaw-bones, that they seemed to form but one; the osseous substance formed around their articulations so completely covered them, that the line of separation between them could not be detected. At 55 years old the man had had a violent blow on the head, after which his jaw became fixed; it had continued so ever since, his food having always been taken through a small aperture, made by contracting his upper incisor teeth.

GLEET.—Mr. S. G. R. Jones cures gleet with the tincture of sesquichloride of iron. John Thompson, aged 24, had gonorrhœa eighteen months ago, and gleet continued since; he had been ordered cubebs, copaiba, &c., but did not apply regularly. He had a discharge of thin,

white pus, when he applied—Mr. J. ordered nitrate of silver and sulphate of zinc injections, alternately to be used, but without effect. He then made use of tincture of iron, gtt. xxv., three times a day, and gradually increased to gtt. xl.; in a fortnight he was perfectly well: has had no return since.

NEURITIC SCIATICA.—The symptoms of true neuritic sciatica (says Dr. Marshall Hall) have not, I think, been fully described. They consist, at the first, of augmented sensibility, and of augmented muscular contraction; in other words, of pain in the nerve, and of spasm and quivering of the muscles to which the nerve is distributed. Afterwards there is numbness, or a sense of "pins and needles" in one (the outer) side of the foot, and muscular debility. These symptoms are perfectly distinct and pathognomonic. During recovery they subside, and leave a distinct tenderness along the course of the nerve, and a disposition to augmented action, or cramp in the muscles. On one occasion, when the pain and numbness, and muscular quivering and weakness, had greatly subsided, there was such excruciating pain and spasm in the gastrocnemii, on attempting to pull off the boot, without the aid of the boot-jack, that the patient had almost fainted away. Mercurial and other purgative medicines, but especially a hot bath every night on going to bed, at 103 deg., for fifteen minutes, were the most effectual remedies. Fomentations did good. There was a disposition to an early morning exacerbation. The jar of a carriage was intolerable. This neuritic sciatica is of an essentially different character from any muscular rheumatism, lumbago. As the latter is inflammation of the muscular fibre, the former is most distinctly, in its two-fold set of symptoms, a neuritis. The numbness is similar to that experienced in the second stage of odontalgia, doubtless from hyperæmia of the neurilemma and compression of the nervous substance.

SPONTANEOUS FRACTURE.—Mr. Toogood, of Bridgewater, presents us with two cases of spontaneous fracture of the thigh bone. The first was that of a man who had for many years been in a weak, nervous, and half paralytic state. In attempting to turn in bed, the bone broke. The case was considered an extraordinary one; it was treated in the usual way, and united after a considerable time, and he lived many years after. The next case was that of James Pople's wife, of Bawdrip, aged fifty-five, who had been long in an infirm state of health, which terminated ultimately in paralysis of the lower extremities. She had suffered very severe pain in her right thigh for some months, which was considered by those about her to be rheumatic; and being a poor woman without friends, little was done for her relief. One evening, on being lifted up in the bed, the bone suddenly snapped; she was aware of it immediately, and cried out that her thigh was broken, but no one believed her, and she lay all that night in dreadful agony; but when, on the following morning, her neighbours saw the limb almost doubled by the violent spasmodic action of the muscles, which drew the ends of the bones forcibly against each other, Mr. T. was requested to see her. Her condition was indeed truly deplorable, and the grating of the bones against each other was distinctly heard. The limb was placed in splints, and united after a longer period than usual. Mr. T. mentioned this case to Sir Astley Cooper, who considered it to be cancer of the bone, and directed his attention to the state of the breast, in both of which we discovered on examination several hard, knotty tumours, of a carcinomatous character.

THE AIR-CELLS OF THE LUNGS.—Mr. Addison, of Great Malvern, states to the Royal

Society, that having been engaged in investigating, with the aid of the microscope, the seat and nature of pulmonary tubercles, he could never discover, in the course of his inquiry, any tubes in a *cul-de-sac*; but, on the contrary, always saw, in every section that he made, air-cells communicating with each other. He concludes from his experiments and observations that the bronchial tubes, after dividing dichotomously into a multitude of minute branches, which pursue their course in the cellular interstices of the lobules, terminate, in their interior, in branched air-passages, and in air-cells which freely communicate with one another, and have a closed termination at the boundary of the lobule. The apertures by which these air-cells open into one another are termed by the author lobular passages; but he states that the air-cells have not an indiscriminate or general intercommunication throughout the interior of a lobule, and that no anastomoses occur between the interlobular ramifications of the bronchia themselves; each branch pursuing its own independent course to its termination in a closed extremity.

ACETATE OF LEAD IN LARGE DOSES.—Dr. Lane of Aughnacloy had a patient labouring under phthisis confirmata, who was attacked with hæmoptysis. The usual remedies were resorted to without relief, and he had recourse to the acetate of lead, administering it in the usual doses, but without producing the desired effect. The powerfully-astringent nature of the medicine tempted him to hazard what he then considered a large dose, without opium. He gave five grains; four hours passed away without any untoward symptom, and the disposition to hæmorrhage seemed less. He then repeated the dose, and waited four hours more with less anxiety, after which he repeated the dose. The patient eventually died from phthisis, but the hæmoptysis did not again return during life. A second case was a lady labouring under menorrhagia; the complaint had been of some standing, and had resisted all medical treatment. He commenced the acetate plumbi in doses of ten grains every four hours, removing the disease on the evening of the seventh day, without giving any inconvenience. This lady had also a disposition to tubercular phthisis, which since disappeared, and this leads Dr. Lane to suspect this medicine may possess some influence over diseases of the lungs prior to the commencement of the suppurative process.

PHTHISIS AND SCROFULA.—Mr. Jeffs says, having had opportunities of witnessing the sufferings of a great many patients labouring under these maladies, of meeting in consultation with several medical men of eminence in the profession, of making post-mortem examinations of some that have died, I observed that the singularity of the symptoms, physically, chemically, and microscopically, are undistinguishable from each other. I have for several years concluded that they are one—scrofula in infancy, and tubercle in puberty or manhood. The different periods of life merely determine the development of the disease in somewhat different forms, and in different organs. Dr. Constalt has lately published a work on Special Pathology, in which these diseases occupy a distinguished and special place. My principal object in these remarks is to state that I believe the application of iodine directly to the blood in the lungs is the most certain, if not the most direct, specific remedy for it. Iodine has for years been proved to be an efficacious remedy for glandular swellings of the goitrous and scrofulous kind; when taken internally its effects are too powerful to be continued long enough to prove satisfactory in tubercles; but when applied in the form of vapour, by inhalation, it comes into immediate contact with the disease, and its efficacy is tested,

and if not a specific for consumption it approximates very nearly to one.

STRIDULOUS CONVULSIONS IN INFANTS.—The disposition to this disease (says Dr. M. Hall) seems to consist in a peculiar susceptibility of the excito-motor property of the nervous system. The immediate attacks are the result of the action of sources of irritation or excitement of this property. This susceptibility should, if possible, be diminished, and the causes of excitement should be most carefully avoided. These are the two principles which must, he believes, guide us in our treatment. The most obvious sources of irritation and excitement are—Dentition, indigestible food, morbid alvine matters, external agents, mental emotions. In cases of dentition, which he calls a state of sub-inflammation, Dr. H. recommends “frec, full, and daily” scarification of the gums within and without the highest or lowest border of the gums, convinced that an infant had better have its gums lanced a thousand times, unnecessarily even, than be subjected to one convulsive attack. To provide against indigestible food Dr. H. prescribes a healthy young nurse, if the child be young—if too old for a nurse, he recommends asses’-milk, or a certain proportion of cow’s-milk and water, thickened with rusk of arrow-root, and taken through a “bottle,” as the sole diet. In case of threatened attack, he directs the fauces to be tickled by a feather, and the stomach to be thoroughly evacuated by vomiting. If the secretions be wrong, a grain of calomel or blue pill should be given frequently. The mildest effectual aperients are next required, as the infusion of rhubarb, with the tartrate of potass and manna. To such a draught a few drops of the tincture of hyoscyamus, of the aromatic spirits of ammonia, and a little of the syrup of ginger, may be added. But a most important remedy is the enema of warm water or barley-water, administered very slowly. To remove the white alvine evacuations and the spasm of the gall-ducts, which often accompany the growing disease, an ample lavement is of the highest importance, and of preeminent efficacy. Dr. H. recommends avoidance of the north-east winds, and speaks very strongly of the curative power of change of air, and sea breezes. All causes of mental irritation, as sudden awaking of a child, slappings, nurse’s ill-temper, alarm, sudden noises, &c., should be avoided. To conquer what he calls the “morbid susceptibility” of the child, the tincture of hyoscyamus and the infusion of the humulus lupulus should be exhibited, flannel should be used, inclemencies of weather avoided, the surface sponged with tepid salt-water. As to the pathology of the disease, the Doctor looks upon the enlargement of the thymus gland as an effect rather than as a cause of the malady. If we carry our views (he says) to the condition of the brain, and bear in mind the effect of the convulsive effort on the thymus gland, and on the face, we shall see the great importance of adopting measures which may relieve the congested encephalon. Unfortunately, depletion adds to the susceptibility of the nervous system, and therefore to the disposition to attacks. The spirit-lotion applied to the head seems to be the safest remedy. In severe cases the ice-cap should be applied.

UMBILICAL HERNIA.—M. Bouchacourt cured a child 8 months old, labouring under this malady, by ligature. The operation was conducted as follows:—The child being secured and the hernia returned, the surgeon assured himself by careful examination that no intestine or other viscs remained in the sac, by rubbing its sides against one another between the finger and thumb. Keeping up a pressure with the finger close by the ring to prevent the protrusion of any part into the sac, a needle armed

with double thread was passed through the base of the projection in the integuments into which the hernia protruded as into the finger of a glove, and the threads being separated, each was tied upon the corresponding half of the swelling. The base was also enveloped by a third thread carried round the whole and drawn tight. The child did not appear to suffer much. After a few days the encircled part swelled, sloughed off, leaving a considerable ulcer. Two months after a very small surface remained unhealthy, but the ring appeared obliterated. The hernia had not returned.

ERGOT OF RYE.—M. Boujean, pharmacist à Chamberg, says, that the ergot of rye contains two distinct active principles, a remedial and a poisonous agent. The first is a reddish-brown extract, very soluble in hot water, which possesses in the highest degree the valuable obstetrical and hemostatic properties which have long been recognised in the ergot. The other is a fixed colourless oil, very soluble in cold ether, insoluble in boiling alcohol, in which alone reside the poisonous properties of this substance. The different nature of these products admits of the remedy being obtained entirely isolated from the poison. As the former is altogether inoffensive, a large dose may be administered without the fear of any of the accidents which are attributed to the ergot of rye itself. This extract acts with extreme rapidity in all hæmorrhages, without producing any unfavourable action, whatever may be the quantity employed. M. Boujean has repeatedly administered large doses in severe hæmorrhages, followed by abortions or otherwise, which instantly yielded to the influence of this remedy. He therefore designates it the *Extrait hémostatique*. The oil acted on animals in the same manner as the ergot itself, only its effects were more prompt. They were almost immediate in some animals, as birds. They died in about twenty-four hours, without ever recovering from the state of stupor into which the poison had plunged them. To obtain this oil with all its properties, it is necessary to extract it with cold ether, and in the operation to avoid all influence of heat; and the principle will be found altogether inert if obtained from ergot not arrived at maturity.

THE ADELAIDE GALLERY.—A series of improvements have recently been made in this institution by the spirited proprietor, who is evidently anxious to deserve the patronage of the public. Promenade concerts, scientific apparatus, lectures properly illustrated on various subjects, delivered in a popular manner, so as to be readily intelligible, and embracing the most important subjects, which ought to be known to every one mingling in society, such as the Bude and Drummond light, animal magnetism, circulation of the blood, geology, galvanism, vocal music and artificial memory, form a portion of the fund of amusement and instruction afforded the visitors. The Photographic establishment of M. Claudet continues to offer its world of wonders. We noticed a group of opera dancers, caught at the very moment of performing one of their most extraordinary saltating wonders, transfixed with wonderful accuracy on one of M. Claudet’s enduring plates. The rapidity of the process our readers may judge of from the fact. We can answer for the rigid truthfulness of the likenesses. We might, beside this, enumerate many other objects of curiosity which crowd the Gallery, a due examination of which would occupy days, and at the same time well repay the observer for the time and trouble bestowed. We observe that the proprietor has, with great liberality, determined to give the receipts of the night from Saturdays to the distressed manufacturers. He deserves success.

MEDICAL NEWS.

PROFESSOR OWEN on Wednesday, the 4th inst. gave a lecture on the fossil remains of extinct animals, found in different strata of the soil of Britain. In the former lecture he considered the skeletons of certain lately-discovered mammalia. His present subject was, the fossil bones of the different species of Reptilia which occupy the upper secondary strata. Parts of no less than six species of crocodiles have been discovered in this country, bearing a resemblance to the skeletons of the existing crocodiles, and showing that they were once more widely disseminated, and of greater variety in their structure. They proved, too, that the crocodiles are more distinct from the lizards than was supposed by Cuvier. Specimens of carnivorous animals, as the Megosaurus, and also of graminivorous glubra, as the Iguanodon, had been discovered. The skeletons of the last have five vertebrae locked together, instead of three, the ordinary number in the Salurian class. Several attained a size remarkably larger than any of the existing representatives of the class. The Iguanodon, for example, judging from one or two of its vertebrae, was about thirty feet. Our present diminutive lizards were preceded by a race of a much larger size. Specimens of no less than six species of Chelonian reptiles have been discovered in the London clay, as also remains of the skeletons of serpents, which must have appertained to animals as large as are to be found at this time in any part of the world. The fossil specimens of the Batrachian class are situated very deep, near the bottom of the new red sandstone strata, and the only traces known for a long time were the prints of their footsteps left upon the clay. Fragments of late, however, have been found, by comparing which with a perfect and beautiful specimen discovered in Germany, an enormous species has been shown to exist, agreeing with the great size of the foot tracks. He then described the various species of preexisting British reptiles, some wading in water, others moving on land, some flying through the air; and deduced a probable inference from the low order, the inactive circulatory and respiratory system, and greater irritability and power of endurance of the muscular fibres in many of these extinct animals, that the air in which they dwelt was less oxygenised, more highly saturated with carbon, and of greater specific gravity, than at present.—We cannot dismiss our short report of this very able lecture without strongly marking our approval of the liberality which marked the whole arrangement. The Museum was well lighted, and all its scientific treasures placed with every aid which mechanical science, and the most perfect classification which the toils and erudition of the greatest of comparative anatomists could give them, under the observation of every member who thought proper to attend. Tea and coffee were provided in the Library. The Lecture-room was excessively crowded.

MEDICINE IN KASHMIR.—The Oriental practitioners of medicine pursue the system of Galen and Hippocrates, whom they call Jalenus and Pokrat, and they distinguish diseases and remedies into hot and cold, moist and dry, &c. In fevers they recommend, that all around the patient should be of a green, as the most cooling colour. For diseases that require the aid of mercury, they substitute that of corrosive sublimate, and in some cases, I was told that they obtain the benefits of an alterative medicine by the persevering administration of a decoction of Chob. i. Chini, (*Smilax china*) the strength of which is increased at intervals of two or three days, until the cure is effected.—*Vigne’s Travels in Kashmir.*

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COURSE OF LECTURES ON THE THEORY AND PRACTICE OF MEDICINE.

Delivered by C. J. B. WILLIAMS, M.D., F.R.S., Professor of the Practice of Medicine, and of Clinical Medicine, at University College.

GENTLEMEN,—Diseases of the *blood* form a sort of connecting link between functional and structural maladies, for, besides the functional derangements to which the circulation is liable, the blood itself being an integral part of the body, is doubtless subject to various structural alterations with which we are to a great extent unacquainted.

The principal elements of which the blood is composed are, as you know, red particles, fibrin, albumen, salts, fatty matters, water, &c., and we shall consider the leading changes to which these constituents are exposed.

1st. *The Red Particles*.—All the functions are dependent upon a due supply of blood; if the quantity is decreased, the functions are lowered; if it is increased, they are exalted; and if the supply is entirely cut off, they altogether cease.

The vivifying influence of the blood is undoubtedly owing to the *red particles*. It was found by Prevost and Dumas that if an animal was bled almost to death and the serum of the blood of another animal was injected into the veins of the former, no restoration could be effected; but that if the *red particles* as well as the serum were introduced, even without the fibrin, resuscitation was the consequence. It is also found that if a muscle, whose irritability has been recently exhausted, is dipped into arterial blood, the irritability will be restored.

Leech found a larger proportion of red particles in the blood of males than in that of females, also more in those of a sanguine than in those of a lymphatic temperament. An abundance of red particles is generally associated with a predisposition to inflammatory diseases, and is shown by the high colour and vigorous action of the system.

When there is a *deficiency* of red particles, general weakness of the constitution is the result, the surface of the body is pale and usually of low temperature. This deficiency is observed in persons who have been the subjects of great losses of blood either by intended or accidental hæmorrhages, and in these cases there is an *increase* in the watery and saline constituents: this latter fact appears due to the flow of serous fluid into the emptied blood-vessels from other parts of the body. Where the red particles are derived from is uncertain: Hewson believed that they were furnished by the spleen. It is quite true that persons labouring under chronic diseases of the spleen do become pale and exsanguineous.

The red particles are found to be *increased* in number in certain cases. This increase is stated to occur in fevers, especially in scarlatina and measles, also in the *first* stage of typhus; it is noticed too in those who are about to suffer from hæmorrhages.

The red particles may not only vary in *quantity*,

but may also become altered in appearance. Thus, in malignant fevers the blood may become dark and of a pitchy aspect. In extreme cases of scurvy the blood may appear brown: it is said that if the scurvy has arisen from *poor* food, the proper colour of the blood may be restored by the addition of common salt, but not so if the disease has arisen, as it frequently does arise, from eating exclusively salted provisions. That the red particles are changed in scurvy is clearly indicated by the staining that appears in the tissues after death.

We know that water causes the red particles when removed from the body to swell up and burst. We may ask whether this change ever occurs in the body?

2nd. We shall next consider the changes in the *fibrin* of the blood. These are seen in the manner in which coagulation takes place. The clot may be uniform in density throughout, and of the same colour, but in many cases this uniformity is interrupted, and contraction takes place to a greater degree than natural, the upper part of the clot being very dense, while the lower part is very lax and contains the greater portion of the red particles.

When the top of the coagulum is entirely free from red particles, and consists only of fibrin, we have the appearance that is termed the *buffy coat*. The thickness of this coat varies greatly; in some cases it has been found to be nearly half the thickness of the whole coagulum, while in other instances it may consist of a mere film at the surface of the clot: this latter appearance we should call a *sizy*, rather than a *buffy*, coat. The question naturally suggests itself, what causes the red particles to subside and the fibrin to remain at the top? There must either be an increase in the weight of red particles, or a diminution in the weight of the fibrin, or a less degree of viscosity in the fibrin, or lastly, the coagulation must proceed more slowly, so as to allow a longer time for the red particles to sink. With regard to the increased weight of the red particles, or diminished weight of fibrin, we have no experiment upon which to rest. As to the effect of slower coagulation, it is found that any means producing such retardation do promote the separation of the red particles and the fibrin; thus, for example, Müller succeeded in obtaining a *buffy coat* by adding potash to the blood, and thereby delaying the coagulation; but yet we frequently observe the presence of the *buffy coat* in cases where the coagulation has been *rapid*, and we also notice its absence where the coagulation has been slow; so that this alone is not an adequate explanation. There is no doubt that the lightness and attenuation of the fibrin would have a certain influence. I cannot but think that a change in the specific gravity of the fibrin and red particles is the most rational supposition. We assume that the red particles have a greater specific gravity than the fibrin, because if separation does take place, no matter what the circumstances of coagulation may be, we always find the red particles below and the fibrin above.

The diseases in which the *buffy coat* is observed, and the quantity of fibrin increased, are those chiefly of an inflammatory nature, especially in inflammations of *serous* membranes. It is also found as the result of *excitement*, during pregnancy and after great muscular exertion, provided such exertion be not carried to fatigue, for if exhaustion is produced the fibrin is *diminished*, and the specific gravity of the serum augmented.

The *coagulum* varies considerably in different cases. If it is all firm, solid, and of full size, we may conclude that the subject is in health, and the blood rich. If, on the other hand, the clot is loose and flabby, and easily broken up, we may regard it as indicative of *defective* energy in the system.

If the coagulum is very small and hard, we conclude that there is a state of great irritation pre-

sent. If, again, it should be *soft* as well as very *small*, we must consider it as evidential of *great poverty*.

Sometimes we find the upper surface of a clot presenting a *cup-shaped* appearance, and such a condition generally indicates inflammatory action, or at least an excitable state; the *buffy coat* is generally associated with it. The cause of the cupped appearance is partly the contraction of the fibrin taking place chiefly towards the centre, and the greater amount of fibrin at the outer part of the clot, which is consequently more firm. When a coagulum is cupped it is usually *buffed* also, but sometimes there is only the *sizy* coat before alluded to.

The *buffed* and *cupped* appearances do not *always* imply inflammation, irritation alone will sometimes produce them. Their presence is by no means an invariable indication for bloodletting; you might even bleed to death without succeeding in its removal, as in phthisis and some other diseases. We sometimes find that in one bleeding the blood drawn last is more cupped than that obtained at the commencement.

It is the *fibrin* that constitutes the materials for the reparation of all the tissues of the body—it may be called the *plasma* of the system. According to its quality, we shall term it *euplastic*, *hæmoplastic*, and *aplastic*.

Opposed to the superabundance of fibrin is that loose and dissolved condition of the blood in which very imperfect coagulation takes place.

Coagulation is said by Hunter to be the result of a *vital* action, but this is no *explanation* of the fact. Arterial blood contains a larger quantity of fibrin than venous blood, and, therefore, when a state of excitement prevails, and the circulation takes place so hurriedly that the blood has scarcely time to undergo its usual changes in the veins, it cannot be surprising that we should find the existence of the *buffy coat* under such circumstances. Thus, in acute rheumatism, where the blood drawn from a vein often presents almost an arterial colour, we observe the *buffy* state of the coagulum in a very remarkable degree. I may observe, that in this affection the function of respiration is not impaired, and, therefore, the arterial character of the blood is maintained.

In asthenic states of the constitution the fibrin is defective in quantity and also poor in quality; the same is the case, too, after great exhaustion of the vital powers. This deficiency is especially seen in the disease called sea scurvy; not only are the red particles altered, as we before noticed, but the *fibrin* is so poor and diminished that coagulation will scarcely take place. Scurvy sometimes arises from the long-continued use of salt food, and it is curious to remark, that the addition of salt to the blood out of the body prevents its coagulation. In all cases where this deficiency of fibrin exists, the reparative processes of the system are very imperfectly performed; thus we find fractures very slow and difficult to unite, hæmorrhages continuing in consequence of the plastic material being absent, and wounds remaining open and unhealed for a great length of time. The red particles being also in some way changed, we can see how the blood in so attenuated a condition may transude in the various tissues and give rise to petechiæ, ecchymoses, &c., and after death to the stains that we find in different portions of the frame.

I may mention as another change to which the blood is sometimes subjected, the appearance of pus globules in it.

3rd. Another element of the blood that is liable to alteration is the *albumen*. This constituent is said by M. Gendrin to be in *excess* in certain *inflammatory* affections, it is ascertained by the coagulation and *specific gravity* of the serum, which is increased in inflammation, and especially in the exanthemata.

The amount of albumen is found to be diminished in diseases of the *kidney*, especially those in which the *urine* is albuminous. In such cases the specific gravity of the serum may be as low as 1012 instead of 1030. The same change occurs also in dropsies, because the serum (which contains the albumen) is effused into the cavities of the body.

Does the same alteration arise in the specific gravity from the use of diuretics and hydragogue purgatives? it is probable that it *does*.

4th. The *oily* matter of the serum, which is generally in small quantity, may become so far increased as to render the serum of a milky character. The cause of this appearance is not ascertained. Dr. Babington says, that in such cases the albumen is deficient.

5th. The *saline and watery* parts of the blood are diminished in diseases where the buffy coat is presented, also in diseases attended with profuse watery evacuations, as diarrhoea, particularly in epidemic cholera, in which the salts and water are almost absent, and the blood is left in a thick glutinous mass. This deficiency would appear to be the cause of the collapse that occurs, for when saline fluids are injected, a most singular amelioration of the symptoms is effected, although the disease itself is not removed.

Dr. Stevens states that the same deficiency exists in pestilential fevers of the West Indies.

The blood may occasion disease by the processes which purify and vivify, it being imperfectly performed; thus, if respiration (by which the blood is arterialized) is impaired, various maladies may result, if the function is completely arrested asphyxia and death must be produced.

There is no function more liable to be affected by changes in the circulation than that of the *nervous system*.

The muscular power is also greatly influenced by the condition of the blood or the organ propelling it; thus the muscular energy is much reduced in cases where the foramen ovale in the heart is open to any considerable extent; the animal heat is also imperfect; the sexual desires absent; hæmorrhages are prone to occur, and are very difficult to arrest.

There is no question that the blood itself is in many cases the principal seat of disease. Gendrin proved this by taking a portion of blood from a man labouring under putrid fever, attended with pustular eruption, and injecting it into the thigh of a cat, the disease was produced in the animal and death followed.

The blood is sometimes affected by the existence of matters in it which ought to have been removed by excretion; thus, for example, urea, if not eliminated by the kidney, may remain in the blood and operate as a powerful poison on the system.

In the same way also the suppression of the bile is attended with coma, and no doubt the blood is diseased.

Having now noticed the principal alterations in the composition of the blood, we shall proceed with the consideration of the morbid variations that occur in its *quantity*.

The first change to which I shall direct your attention is *deficiency* of blood. This state has been termed *anæmia*, *hypæmia*, *oligæmia*. The word generally used to express it is *anæmia*. I need scarcely tell you that the blood is absolutely essential to the performance of the various functions of the economy, and that if the supply of blood to any part is defective, the functions of the part must suffer to a greater or less degree. Supposing for example a limb to be deprived of its proper quantity of this fluid, it will soon become weak and reduced in thickness, because the muscles not being duly nourished waste away. If the supply of blood be diminished to a still greater extent, the vitality of the part may be entirely destroyed and mortification result; this extreme state is found in cases where the main artery of a limb is plugged up by a clot of blood, or compressed by a tumour, so that little or no blood can circulate. Gangrena senilis appears to be frequently associated with the deposition of calcareous matter in the coats of the arteries. It may arise also in connexion with extensive organic disease of the heart, without any such deposition in the arteries; in this case we find that the parts of the body most distant from the

centre of the circulation, are those which first suffer. The process of gangrene comes on very rapidly when the vessels are completely obstructed; thus, Majendie produced gangrene in forty-eight hours by the injection of powdered charcoal into the arteries of a dog's leg.

LECTURES ON CHEMISTRY.

By JOHN SCOFFERN, M.D., Lecturer on Chemistry at the Aldersgate School of Medicine.

THE next imponderable agent to be spoken of is electricity, with the intimate nature of which we are no more acquainted than with that of heat or of light. For the sake, however, of rendering electrical phenomena amenable to mathematical calculations, and for the sake, so to speak, of investing a shadowy phantom with mortal garbs, two rival theories of electricity have long held their sway. Each has boasted of strenuous advocates, and the tenets of each have been supported by an almost unparalleled amount of skill and sophistry. Modern discovery has, however, gone far to prove that both these theories are false; that consequently the opinions generated by them are fallacious; that the laws of electricity will hereafter be found to come under some higher generalization than any hitherto attributed to this science; that, in short, electricity may eventually be found to be merely an effect of certain vibrations, polarities, or other conditions of some unknown principle, probably identical with that which we assume to be concerned in the phenomena of light and heat.

Still we can only investigate an almost supernatural agent by attributing to it some natural form, by associating with it some common properties, and instituting familiar though forced comparisons. As in heathen mythology, the supposed attributes of a deity were embodied in carved representations of earthly forms, so must we for the present employ theories which are *thought*, nay, almost proved to be wrong; retaining them conventionally till better ones be found; using them as scaffoldings to structures now being raised, to be cast away for ever when these structures shall be complete.

It was known to the ancients that the substance, amber, called in Greek *elektron*, acquired the property of attracting towards itself light substances when rubbed; further experiments proved in course of time that many other bodies besides amber enjoyed the same property; that this attractive influence was only one out of a great number of curious phenomena, all of which were supposed to depend upon the operation of a peculiar fluid termed the electric fluid, or electricity, from the word *elektron*, amber, and the science of investigating these phenomena was termed the electric science, or simply *electricity*.

This property of amber just mentioned, was minutely described by Thales, of Miletus, who lived about 600 years B.C., and, indeed, he even offered a theory to account for it. Theophrastus, too, who lived about 300 years B.C., mentions the same thing, and Pliny, about the seventieth year of the christian æra, alludes to a similar property. Salmatus, too, in his commentary upon Solinus, who lived A.D. 218, mentioned that Karale, the term by which amber was known amongst the Arabs, was said by Avicenna to be of Persian origin, and to signify the power of attracting straws. These are not all the phenomena which can be adduced of electrical phenomena being known to the ancients. Aristotle describes pretty accurately the extraordinary power of giving shocks possessed by the torpedo or electrical eel: he says, "this fish produces a torpor upon other fishes which it is about to seize, and having by that means got them into its mouth feeds upon them." He adds, moreover, that it hides itself in sand and mud, and catches those fish that swim over it by benumbing them: this same fish, continues he, is also capable of benumbing men. Pliny again mentions the same thing, and states, that if it be touched by a rod or spear, even at a distance, it paralyses the strongest muscles, and arrests the feet (*Nat. Hist.* XXX., ii., chap. i.) Indeed, at periods a little more recent, electricity as developed by the torpedo was employed in curing certain diseases. Seribonius Largus relates that Atheno, a freedman of Tiberius, was by this

means cured of the gout, and Dioscorides advises the same thing for inveterate pains of the head.

Thus we have succeeded in proving that a great number of electrical phenomena were known to the ancients, although the attempt to marshal them in order, and to explain their rationale, or, in other words, the foundation of electrical science, was a work of much later period, the credit being due to Dr. Gilbert, who, in the year 1600, published a book on magnetism, in which a great number of electrical phenomena were mentioned, and a theory offered for the purpose of explaining them.

To continue our history of electrical discovery beyond this epoch, would, in the present stage of our inquiries, give rise to much confusion, inasmuch as the order of discovery in this science is not the one best adapted to the purpose of developing its first principles to a beginner. Here, then, we leave the historical portion of electricity. Disregarding at the outset the trammels of all theory by which our explanation of facts might be in the least biassed, we will perform a few simple experiments with a view of seizing upon the peculiarities of electrical action, then we will see what theory shall be required to embrace them all. In these investigations, let us merely consider electricity as a property, whether it be a substance or not will hereafter be discussed. Before me I have a stick of sealing-wax, of metal, and of glass, each in its turn will become a subject of experiment.

I hold the stick of sealing-wax over a little feather, the latter does not move. I now rub the sealing-wax with a piece of flannel, and again hold it over a feather, the result is now somewhat different, the feather being attracted towards the sealing-wax. I now repeat the same experiment, merely substituting glass instead of sealing-wax, and similar results develop themselves.

Lastly, I hold the metallic rod over a feather, no motion of the latter results. I rub the metallic rod, and again hold it over the feather, still no motion; may I then not infer that the metallic rod is *essentially* different from the glass and wax rod in this respect? The inference seems just, and, indeed, was made by electricians of former times; a slight modification of the experiment, however, will demonstrate the fallacy of such views. I now take a rod partly of glass and partly of metal, holding it by the glass end I rub the metallic one, and *now* on applying the latter to a feather it is attracted as before, a fact which proves that the attractive excitement, call it what we may, is capable of being developed in metal as well as in glass or resin, only it traverses the former with facility, the latter not.

Referring again to the same experiments, or at all events to modifications of them, we shall find that a feather, or other light body, after clinging for a certain time to any substance that has had friction applied to it, so as to become excited as it is called, flies away again, or, in other words, is repelled, proving that the agent thus generated by friction, has a repulsive no less than an attractive agency; but such light body when tired of clinging to excited glass, will fly with eagerness to excited sealing-wax, and *vice versa*.

From these experiments, it would appear that the excitement may possibly depend upon the development of two agents instead of one.

My object in lecturing, is rather to develop principles than to work out details. I do not stand here to point out every little plaything of an instrument which the ingenuity of electricians has devised. I need not waste your time in showing how diversified may be the exemplifications of those facts which our simple apparatus has demonstrated. Other light substances, besides feathers, will suggest themselves to you as more convenient for certain experiments than feathers. Other means than manual exertion will suggest themselves for employing friction. With these, at present, I have nothing whatever to do, and let me entreat of you not to get bewildered in the contemplation of the host of toys and complex machines which have originated in the wayward and perverse ingenuity of philosophical instrument makers.

It appears that the excitement called electrical, will pass through metal and not through glass or sealing-wax, consequently, if a piece of metal be fixed on a piece of glass, the former may have im-

parted to it a certain amount of electrical excitement which is prevented escaping by the glass, hence such a piece of metal is said to be *insulated*; this fact is taken advantage of in many electrical instruments.

Not only do glass and sealing-wax, but many other substances oppose a difficulty to the passage of electricity, but to imagine that they intercept the whole, or are, strictly speaking, non-conductors, is altogether an error.

To proceed again with our experiments, I have before me two pith-balls, suspended each by a silken string, and silk is a *non-conductor* as it was called, imperfect conductor is a better term. I now touch the pith-balls with a piece of excited glass, they diverge to some extent; I touch them with a glass rod, they do not collapse; with a rod of sealing-wax, a similar result; with a rod of metal, *now they collapse*. This is another experiment to prove that metals conduct away electrical excitement better than glass or sealing-wax.

Two pith-balls made to diverge by communication with the substance *rubbed*, again approximate by approaching them with the rubber; proving that one kind of electrical state cannot be developed without *producing* the other, and that the two forces thus generated are mutually proportionate.

Now these are the *chief* electrical phenomena, one more—namely, that of *induction*, as it has been called—we are not yet in a position to discuss. Theory, you are aware, should be built upon an observation of facts, and not precede it: let us see then to what theory—the facts just noticed—will lead; and to render all more lucid—more capable of being appreciated at one glance, and brought *en masse* before our intellects—let us arrange the facts deduced in a tabular form; they will stand thus:—

Properties and Effects of Electricity considered merely as a Force.

Developed by various means, <i>e. g.</i> by friction from Glass and vitreous bodies.	Developed by various means, <i>e. g.</i> by friction from Resin and resinous bodies.
Attracts light bodies.	Attracts light bodies.
Self-repulsive.	Self-repulsive.
Differs from that developed from Resin.	Differs from that developed from Glass.
<i>Vitreous—Du Fay.</i>	<i>Resinous—Du Fay.</i>
<i>Positive—(+)--Franklin.</i>	<i>Negative (—) Franklin.</i>

Mutually attractive.
Conducted away by certain bodies, *e. g.*, metals
Not conducted by certain other bodies, *e. g.* sealing-wax.
Mutually proportionate.
May be induced.

The portions of this Table which are written in *Italics* we have not yet proved.

I have already called your attention to the fact, that electrical excitement is not capable of being propagated through bodies of all composition with equal readiness, although no substances are perfect electrical conductors, and none perfect electrical non-conductors. As a matter of convenience, substances being regarded in this light may be divided into three classes of conductors; imperfect conductors and non-conductors: but remember, once for all, that the terms are *relative*, not *absolute*.

Conductors—Metals, Charcoal, Plumbago, Strong Chlorides, Fused Iodides, Fused Salts, Fused Acids, Strong Alkaline Solutions.

Imperfect Conductors—Water, Damp Wood, Alcohol, Damp Air, some Oils, Vegetable and Animal Bodies.

Non-Conductors—Spermaceti, Glass, Sulphur, Fixed Oils, Resins, Ice, Diamond, Shellac, Oxalate of Lime, Dry Gases, and Air.

The simple experiments already performed sufficiently testify that we are dealing with a very subtle agent, perhaps two agents. The most prominent ideas called forth by electrical experiments, are those of the flow of a *fluid* or *fluids*; this, far from being the true state of things, may possibly be nothing more than a progressive assumption and resolution of polarities: but no matter, the electric fluid, or fluids, were long spoken of, not merely in an allegorical sense, but literally; and although modern philosophy is disposed to offer a

more recondite explanation of electrical phenomena than is furnished by such courses of an absolute fluid, still I repeat, that the ideas naturally arising from a view of electrical phenomena, do, in spite of all philosophic abstraction, suggest the existence of an electric fluid, or electric fluids.

What theory do these facts which we have just witnessed suggest? I think that a person obliged to theorise on these data, would at length frame over again one of the two celebrated electrical theories, *i. e.* of Du Fay and Franklin, respectively.

Du Fay imagined that electrical excitement depended on the disturbance of equilibrium between two fluids, which he termed *electrical fluids*; that all bodies in nature contained those fluids equally combined:—*then* no electrical phenomena were evinced; but whenever the equilibrium was disturbed by friction, percussion, or many other causes, then certain excitements termed electrical became manifest; some bodies he imagined did not become electrical; these he termed *non-electrics*: the same he furthermore imagined exclusively conducted the excited fluid: hence he termed them *conductors*; in this, as I have shown, he fell into a mistake. The fluid developed from glass and vitreous bodies he called vitreous; the one from resins and resinous bodies he called resinous; finally he supposed that these fluids were self-repulsive, and mutually attractive of each other. Such was Du Fay's theory.

Franklin could not see any necessity for assuming the existence of *two* electricities; he imagined that the vitreous electricity of Du Fay might be owing to an excess, and the resinous of the same philosopher to a diminution of *one fluid*. Franklin's, then, was the theory of one fluid, and Du Fay's of two.

You will ask, perhaps, which theory is likely to be correct? Why, I must answer, neither; yet they do serve most wonderfully to localise our ideas, and enable us to reduce this fleeting subtle agent to something like a tangible shape. Either of the two rival theories is equally capable of according with electrical phenomena; this is what the lawyers would call weakening evidence by too much proof, and we are led to believe from their very easy adaptation to circumstances, that both are wrong.

ON THE TREATMENT OF DIABETES.

(Being a Paper read before the Medical Section of the British Association, Monday, June 27, 1842.)

By CHARLES CLAY, M.D., Member of the Royal College of Physicians, London, and Lecturer on Medical Jurisprudence, &c., Manchester.

I FEEL desirous of directing the attention of this Section to that often-discussed but still unsettled question, the Treatment of Diabetes. It is not, however, my intention to enter into any historical detail respecting this disease, or discuss at any length the propriety or impropriety of the almost endless variety of treatment proposed, and equally endless variety of theories as to its cause. I am of opinion that a long course of practical experience, with comparative views as to the result of various modes of treatment, will at some future time enable us to arrive at more just conclusions respecting the cause. I would, however, briefly premise, that my own opinions are favourable, in the first place, to the idea that diabetes mellitus and insipidus are one and the same disease, differing only in its stages. Secondly, I think it well established that the stomach and not the kidneys is the primary seat of disease; and thirdly, that the treatment should embrace two distinct objects: first, the correction of the secretions of the stomach disposed to form saccharine matter, which, whether present or not in the circulation, has a peculiar action on the kidneys, producing laxity in their texture, the result of which is diabetic flows of urine highly charged with saccharine matter; secondly, the correction of the laxity prevailing in the kidneys, a circumstance which undoubtedly exists, has been noticed more or less in every *post-mortem* examination, and which no writer on this subject, as far as my knowledge extends, has attempted to deny. Like others, I have adopted a mode of cure that has been decidedly successful in three cases, which I recorded in the *Lancet* of last year. One case was in 1836, another in 1838, and

the third in 1840. I have now to state that no return of the disease has been observed in any of these cases up to this moment, consequently they may be enrolled as decisive cures. From this success I have been led to inquire how far treatment analogous to mine had been successful with other practitioners.

All that is necessary to be stated in respect to the mode of treatment adopted by myself, will be fully elicited in the brief recital of the cases in question.

I do not communicate them as embracing a mode entirely new, since it has been indirectly touched upon by several writers; but such is the uncertainty attached to this disease, and so numerous are the remedies proposed, each having had its season of success, and having also as frequently failed in the hands of other persons, so that in respect to any specific plan we are in the same state of uncertainty as we were a century ago. The success attached to the cases I am about to introduce justifies me in bringing them forward, in the hope of the plan being more generally tested, and the merits of the medicine, if any, allowed in the list proposed for the cure of diabetes.

CASE 1.—James Newton, of Ashton, æt. 75, applied to me in February, 1836. Had been suffering for two years from diabetic flows of urine, which for nine of the last months had very considerably increased. He had been under the care of different persons, and a variety of means were tried, but no abatement of the symptoms was observable. When he applied to me the quantity of fluid discharged for the last six days averaged nine pounds and a half in twenty-four hours, fully charged with saccharine matter; he was much emaciated, with an anxious countenance, a dry, furred tongue, dry skin, and excessive thirst. For nearly two months I tried the plans of various authors, but with no better success than my predecessors, except for a few days under the exhibition of opium and nitrous acid, to the extent of about five grains per diem of the former, and 3iss. per day diluted of the latter; this, however, was but temporary. In the beginning of April I gave the following mixture, and I must confess not with any hope of much benefit arising from it:—R. Tincture opii, 3iss.; tincturæ sesquichloridi ferri, 3ij.; quinae disulphatis, grs. viij.; aquæ distillat, 3ij.; M. 3i.; 4ta hora. At this time the specific gravity of the urine was sensibly diminished, but as yet the saccharine principle appeared not in the least diminished. On the eighth day an average was taken of the last five days' urine, when it was found to be about seven pounds per twenty-four hours. The countenance wore a more cheerful aspect, less anxiety expressed, tongue much less furred, skin slightly moist, and evidently improving as to constitution generally. On the eighteenth day another average of the last five days showed the quantity of urine to be barely four pounds in the twenty-four hours, in which scarcely any saccharine character was observable. On the twenty-eighth day he appeared in perfect health, not a traceable symptom of the disease remaining; from this time he went on improving as to general health.

On the forty-second day he ceased taking the medicine, and has had no return of the disease since; when discharged, the specific gravity of the urine was 1.009.

CASE 2.—Wm. Grundy, of Hurst, æt. 30, put himself under my care in April, 1838, after having been under the treatment of different persons without any apparent benefit. From the decided success of the tinctura ferri sesquichloridi, in the case of Newton, I determined to lose no time in this case, and therefore commenced immediately with the formulæ, as in Newton's case. The average quantity of urine had never been considerable—it now stood at 8lbs. in twenty-four hours; the disease, however, had existed much about the same for twenty months, the urine fully charged with the saccharine principle, whilst its specific gravity was found to be 1.037, compared with water 1.000, which on evaporation produced 630 grains of solid extract. My patient being young, and having a small family, was extremely anxious, very rigid in his adherence to the prescribed rule as to diet and medicine; he was of tall stature,

with a narrow chest, and had a slight but long-standing cough. Felt very irritable and annoyed, that because his appetite appeared very extra his friends fancied nothing was seriously the matter with him; the skin very dry. After taking the medicine very punctually for five days, the little hope he had indulged in of getting well deserted him on my observing that I could not detect any sensible diminution either in the quantity or quality of the urine. From this time, however, the decrease was evident; my patient's spirits rose with the prospect, and I did not commence taking the average till the ninth day, which, on the fourteenth, showed an average of five pounds only; the two last days only three-and-a-half pounds each: the skin then became very moist. On the twenty-fourth day the urine presented no diabetic character, and its quantity not exceeding thirty ounces in twenty-four hours. On the thirty-fifth day he ceased taking his medicine regularly, and in a few days after that he ceased altogether.

CASE 3.—Mary Wild, æt. 56, of Ashton, had been subject to diabetic discharges for eight months, for which she had been variously treated. Her general health had for some time been very precarious, from the cessation of menstrual secretion. The average quantity of urine for ten days before I put her under the same treatment as the previous cases was seven pounds and a half (some of the days included showed up to ten pounds). In this case the saccharine character was not so evident as in the former cases (specific gravity 1.028). I had great difficulty in confining my patient to animal food, which she loathed exceedingly. After adopting the former treatment for six days I found the average of five days past slightly, but very slightly diminished. On the twelfth day a second average was taken, which, to my great mortification, exhibited an increase to nine-and-a-half pounds per diem for five days past. Suspecting my patient had transgressed, I threatened to throw up the case if not supported by a rigid observance as to diet: this had the desired effect. On the fifteenth day I took an early average of the three days, and found an abatement: the quantity now stood at seven pounds. From this time to the twenty-eighth day the quantity decreased daily, when the five past days exhibited but four pounds of an average. Unfortunately, at this period, pleuritic symptoms made their appearance. Hoping for a metastasis I suspended my plan of treatment, and adopted what I conceived necessary for the present. Bleeding and calomel were resorted to; and the pleuritic symptoms soon disappeared, during which the diabetic flow had increased to six pounds per twenty-four hours. The old treatment was resumed with decided advantage. In six weeks from the commencement the urine for the last five days had presented nothing differing from natural, either in quality or quantity. She still continued the medicine till the beginning of the ninth week, when she ceased taking it; feeling herself quite well. For some time, however, she was careful to continue with animal food, and has had no return of the disease since that time: specific gravity of urine when discharged, 1.011. These cases are instructive, inasmuch as they were not of a favourable character. They had existed for a considerable time. They occurred at very different ages; two of them accompanied with pulmonic affections, but neither to a serious extent. They had all been tested by other treatment, accompanied with strict animal regimen, but had failed, and were good cases for the trial of any new plan.

I cannot refrain making some observations that occurred to me whilst treating the cases just given, and since that time by reading and reflection.

(To be concluded in our next.)

MEETINGS FOR THE ENSUING WEEK.

- MON. 25. Botanic Gardens, Chelsea, 9 a.m.
TUES. 26. British Museum, Natural History, 10 a.m. to 4 p.m.
— Zoological Society, half-past 8 p.m.
WED. 27. Botanic Gardens, Regent's Park, 4 p.m.
THU. 28. British Museum, Natural History, 1 a.m. to 4 p.m.
FRI. 29. Botanic Gardens, Chelsea, 9 a.m.
SAT. 30. Mathematical Society, 8 p.m.

MEDICAL RETROSPECT FOR THE LAST SIX MONTHS.

By W. BRAITHWAITE, Esq., Leeds.

M. BENOIST proposes to substitute a solution of carbonate of soda for liquid albumen, as an antidote in cases of poisoning with salts of copper. He affirms that it forms with the salts of copper an insoluble carbonate, having no deleterious action; and that it is superior to albumen, as this, when used too freely, dissolves the poison.

The French practitioners, who are delighted with novelties, are now placing great reliance on phloridrine, as an adjunct to our preparations of cinchona. "It is extracted from the bark of the roots of the apple tree and the wild cherry tree." M. Lebandy, editor of the 'Journal des Connaissances Med. Chir.,' says, "its efficacy is so decided that we cannot hesitate to class it with the most powerful febrifuges."

Perhaps in no branch of surgery have more improvements taken place than in the treatment of strictures of the urethra. The works of Arnott, Cooper, Wade, and Arntzenius, which are so ably reviewed in the 'British and Foreign Medical Review,' bears testimony to the correctness of this observation. Hunter believed that stricture was never produced by gonorrhœa; and Home and Abernethy believed that it was generally brought on by the use of injections during the inflammatory stage: we cannot, however, but agree with the reviewer of these opinions, that "we are much more likely to expose our patient to the chance of stricture by totally omitting the use of injections in gonorrhœa, than by their judicious employ. The quicker a gonorrhœa is cured the less likely are we to have stricture follow it. Gonorrhœa is a disease whose ill consequences are in a direct ratio with the period of its continuance." When stricture has once taken place, it must be treated either by simple dilatation, dilatation by fluid pressure, or by the bougie armed with the potassa fusa, or nitrate of silver. The bougies used by Arntzenius are very peculiar; they are made of strips of parchment rolled up so tightly that the layers adhere pretty firmly to each other, and having at one end a knob or drop of glue made of boiled parchment. Dr. Arnott uses his fluid dilator with great efficacy. It was constructed with the view of being pressed into the strictured portion and then dilated, with the same object which was had in view when the old tents made of sponge, and bougies made of catgut, leather, &c., were manufactured. This dilator of Dr. Arnott's "should be of little bulk and of easy introduction, and should be made capable of assuming and retaining any shape or magnitude when in the urethra; or should also be capable of exerting a distending force to any degree, and always under control." It consists of "a tube of oiled silk, lined with the thin gut of some small animal to make it air tight, and attached to the extremity of a small canula, by which it is distended with air or water from a bag or syringe at the outer end, with a stop-cock or valve to keep the air or water in when received." In hard fibro-cartilaginous strictures impervious to instruments without employing injurious pressure, Mr. Wade revives the practice of Mr. Whately, viz., the use of bougies armed with potassa fusa, which in his opinion acts beneficially upon strictures, "first, by its dissolvent powers; secondly, by promoting absorption, and stimulating the congested vessels to contraction; thirdly, by relieving irritability and inflammation." He prefers the potassa fusa to the nitrate of silver, as the former does not, like the latter, cause a slough, and hence the painful sensation produced by the urine passing over an ulcerated surface is avoided.

When the stricture is absolutely impervious, it is not now considered advisable to use the forcible catheterism as practised by Dessault, nor to depend upon the forcible injections of Amussat, but to have recourse to either puncture of the bladder above the pubes, or cutting into the urethra behind the stricture. The first is certainly the easiest operation, and much safer than has been generally supposed; "the puncture through the rectum is preferable to it only in the few cases in which the bladder lies very deep and far back, and the punc-

ture through the perineum should be adopted only when effusion of urine has already taken place. The last mode of operation, by cutting into the urethra behind the stricture, is peculiarly adapted to cases in which the retention depends on obstruction by foreign bodies in the canal, or in which the urethra is manifestly very much dilated behind the stricture," but at other times the difficulty of finding the urethra is a great objection. In the treatment of stricture, Mr. Cooper first uses a silver catheter or bougie, to ascertain the seat of the affection, which should be pressed against the constricted portion for a few minutes, which will overcome the difficulty if muscular spasm be the cause of it. If this does not overcome the resistance in three or four minutes, it is evidently owing to the density of an adventitious deposition. In this case more force may be used; but if by moderate force it be not overcome, the attempt must be relinquished for the present, and leeches to the perineum, and purgatives should be recommended. In many cases, by maintaining an equable degree of force on the surface of the stricture, inflammation and softening down of the newly-formed substance is produced; suppuration is set up, and the stricture gives way; and it is now more particularly that the surgeon should exercise the greatest caution to avoid making a false passage, which he is certain to do if he continues to press upon the sides of the urethra instead of the stricture itself.

Few cases come under our notice which are more dangerous than the contusion of a hernia, which may be so severe as to cause the rupture of the bowel, or such a degree of sloughing as may end in the escape of the fæces into the peritoneal cavity. What are we to do when the blow or injury has been so severe that these results are apprehended, and if the violence of the symptoms be such as to warrant such a conclusion? The most judicious practice, according to Mr. Key, is to open the sac, and if fæces are present to liberate them, and if not, to wait, in order to see if the bowel should slough. In either case, the opening of the sac will allow a free exit to any fæces which are, or which may be present. In one case the patient experienced no relief for three days from the opening of the sac, when a copious discharge of fæces took place and completely relieved him. In another case the blow was so severe, and followed by such severe symptoms, that the bowel was supposed to be ruptured. On opening the sac, however, no fæces escaped for four days; at the end of which time the fæces appeared and escaped freely. On the seventh day the fæces escaped by the rectum, although they continued to pass through the wound for five or six weeks, when ultimately the part healed. These facts will recall to the minds of most practical men, cases of such contusion, which have been left to themselves and have proved fatal by extravasation of the fæces into the cavity of the peritoneum, when an opening into the sac would have prevented such an occurrence; for, although such an opening ought not to be undertaken except from the strongest suspicions that rupture or sloughing has been caused, yet when we remember how often the sac is opened in cases of supposed strangulated hernia, without any danger resulting, we need not risk the life of a patient by an unnecessary delay in such a procedure.

The operation of M. Callisen, of Copenhagen, to produce an artificial anus in the lumbar region, over that portion of the intestine not covered by the peritoneum, has recently been revived by M. Amussat with great success. In all the old operations for this purpose in the iliac region, by MM. Litre and Pilon, the peritoneum was wounded, which seems to have been the chief cause of death in numerous cases. In his operation in the lumbar region, Callisen "proposed to make a vertical incision extending from the edge of the false ribs parallel to the anterior border of the quadratus lumborum muscle. He thus hoped to reach the colon between the layers of its short and imperfect mesentery." This operation, however, was attended with some difficulties, till modified by Amussat, who "has shown that the failure of the operation on the dead subject was owing to the intestine being empty, and that in such cases as require the formation of an artificial anus the colon is greatly distended; in which condition the layers of the

peritoneum, forming its imperfect mesentery, are so far separated as to allow the intestine being reached without opening the peritoneum." Amussat has, moreover, adopted the transverse instead of the vertical incision. This important operation has not only been performed on the adult, but also in an infant of forty-eight hours' old.

Various instruments have been invented for the evacuation of fluid from the chest. Mr. Snow, from his anxiety to avoid making a communication between the cavity of the chest and the external air, makes use of an instrument which draws off any liquid, and at the same time prevents the transmission of air into the chest. "It consists of trocar and canula, with a stop-cock in it; the trocar to pass through the open valve of the stop-cock. A portion of the trocar must be made perfectly cylindrical, and to fit accurately the whole length of the canula. In withdrawing the trocar from the canula after their joint introduction, it must be brought so far as to be clear of the stop-cock, which point is indicated by a mark on the trocar, and then the stop-cock must be turned before the complete removal of the trocar. The portion of elastic tube must now be screwed to the canula; and to this tube must be serewed a double action syringe, with two distinct valves, like a stomach-pump. The valve of the stop-cock can now be reopened, and by working the pump, the contents of the pleura, whether gaseous or fluid, will be withdrawn."

This is certainly an ingenious instrument; but we must confess that we do not see that it is necessary to employ all this care to avoid the introduction of air into the thorax, when we know that the lung will frequently expand with the chest, although air be within its cavity, except it be bound down by adhesions. And even if air be introduced, it will frequently be absorbed in a very short time.

The grooved needle is also used by some practitioners to evacuate any fluid in the chest: Dr. Prichard, of Bristol, uses a needle with a larger groove than in the common instrument, and in this way is able to evacuate any fluid with perfect ease and safety; and with this advantage, that the pain attending the operation is so very trifling, that the patient will occasionally call for a repetition of it, after having once experienced the relief which follows its use. He has likewise used it successfully in ascites, and strongly recommends that both in this disease and in hydro-thorax, it should be used much earlier than the trocar is generally recommended, being "persuaded that the practice of deferring paracentesis in ascites, till all other means have been long tried, is one principal cause of the frequent return of the effusion." Dr. Babington has invented another very ingenious instrument for these cases, which in some instances may be even superior to the grooved needle, through which fluid will at all times flow with difficulty. It consists of a very small trocar and canula, which, together, are not thicker than an ordinary grooved needle, and a probe which would pass through the canula. It is very possible for the grooved needle to mislead the practitioner in his diagnosis in some cases, and especially in empyema, which is seldom a true effusion of pus, but only a puriform-looking liquid; "and the grooved needle often separates the serum from the small secretions of albumen, and causes empyema to be thought a very simple serous effusion." Both these instruments, however, may easily be used, and with perfect safety to the patient. In one case in which it was used by Dr. Bird no fluid escaped, and on passing the probe through the canula the lung could be felt distinctly, without any ill effects to the patient.

We think that in most fistulous communications between the bladder and vagina, and rectum and vagina, the actual cautery has failed so frequently, not so much from the improper way in which it is applied, but from the *short intervals* which have been allowed to elapse between one application and another; and we may extend the same observation to cauterisations of the mucous membrane of the vagina in cases of the prolapsus uteri. In cases of severe burns, Nature requires a long period to complete the full extent of cicatrization and contraction of which the parts are capable, and were we to be repeatedly interrupting the process of

contraction by fresh cauterisations, we should only retard the operation, and perhaps eventually frustrate it in some degree. This is especially applicable to cases of vesico-vaginal fistulae in which it has been recently suggested by Mr. Liston, and acted upon by Dr. Payan, that the cauterisations should be practised at *very long intervals*, so as to allow Nature to complete the full extent of contraction of which the parts are capable, before having recourse to a fresh application of the cautery. It is recommended that four or six months should intervene between each operation. We should like to see the same success attending a similar action of the mucous membrane of the vagina for prolapsions of the womb.

In cases of gangrenous inflammation it is well to remember the excellent effects which Dr. Davidson, of Glasgow, has found to result from a saturated solution of nitrate of silver in nitrous acid. He applies the solution to the surface of the part daily, and in the interim applies an emollient poultice. Nitrous acid is mentioned by several writers as valuable in checking gangrenous ulceration, but not, as far as we remember, in combination with nitrate of silver. The addition of this latter substance renders the liquor more caustic, tends to diminish inflammatory action, and leaves an ulcer having more healthy granulations. Dr. Davidson also makes some excellent remarks on the use of ioduret of sulphur in porrigo, lepra, and psoriasis, to which we would beg to direct the attention of the profession.

A very interesting report is published of the amputations performed in University College Hospital, in which the flap amputation is recommended, as being not only more quickly performed, and with much less suffering to the patient, but as being attended altogether with better results, both as regards the form of the stump and the rapidity of its cure. There may be much truth in this observation; and yet, when we recollect that the circular operation has also its advantages, that the time occupied in its performance cannot be much longer, and that when a great number of cases are calculated, the success of the circular is at least equal to that of the flap amputation, we do not think that the former ought to be put on one side. Out of 115 cases recorded by Mr. Aleock, 90 of which were circular and 25 flap amputations, the proportion of secondary hæmorrhages was somewhat greater in the former than in the latter, and with respect to necrosis of the sawn bone, its liability was about equal in both kinds of amputation. But the mortality which followed these amputations was rather greater in the flap than in the circular amputation. A very important improvement is now frequently adopted, in pressing on the artery of a limb during amputation: instead of applying the tourniquet, an assistant commands the artery with his fingers. By this means very little blood is lost during the operation; for not only is the main artery completely secured, but the return of blood by the veins is not interfered with, as it is by the circular pressure of the tourniquet. Another advantage in this process is, that the retraction of the flaps is not interfered with when no tourniquet is used, so that the bone can be sawn through considerably above the point at which the first puncture in the skin was made. We think Mr. Liston's mode of dressing the stump very judicious, and far preferable to the immediate and hasty approximation of the flaps, which is so frequently practised. An interval of four or seven hours is frequently allowed to elapse after the amputation, before the surfaces are brought into juxta-position; cold water is, during this time, frequently applied to the stump, and the coagula even gently washed from the surface, so that the water may be applied more immediately to the vessels: in the course of a few hours the divided surfaces become glazed over, the wet lint and small remaining coagula are removed, and the dressing of the stump is then proceeded with. The flaps are now brought accurately together, and retained by suture and isinglass plaster.

Mr. H. Carmichael suggests a very simple, and yet, we believe, a good method, of obtaining as much blood from the temporal artery, and other small arteries, as we desire. We know that all divided arteries have a strong disposition to con-

tract, and that the divided extremities separate and retract within the sheath, while the orifices ultimately close altogether; at the same time, the blood clots both in the vessel itself as far as the next branch, and also in the sheath, so that a complete stoppage is put to the flow of blood. The artery should now be *jillipped* in different parts with the finger, and at the same time pressed along its course with the back of the nail, so as to squeeze out any clot which may be lodging; the jet of blood will be again renewed, and will again diminish as at first; the same course must be again adopted, and repeated so long as it may be required. In opening the artery it is necessary to divide it completely across.

It has long been known that both the carotid arteries and the vertebrales may be tied with safety, provided sufficient time be allowed between each operation to allow the anastomosing circulation to be completed; but we believe it has only been lately confirmed by a report of the French Academy, that both the carotids may be tied at the same time without immediate danger to the brain—and, moreover, that the danger is not so much in the brain itself as in the lungs, the vertebral arteries being sufficient to supply the brain. The great art in the management of a patient whose carotids have been tied, seems to be in bleeding him freely, if his strength permit, in order to relieve the lungs of that dangerous state of congestion which would produce fatal apoplexy of those organs. Even in the horse, the vertebrales have been found quite sufficient to keep up the cerebral circulation, although in these animals these arteries are very small.

It will be remembered by many that we mentioned an interesting case of Mr. Mannder's, in which that gentleman relieved a case of strangulated hernia, by introducing the tube of the stomach-pump to a considerable distance up the bowel, so as to give vent to flatus, which was soon followed by a reduction of the strangulation. Mr. A. S. Lawrence, of Clifton, relates an interesting case of strangulated hernia, in which he effected the reduction not by the tube of the stomach-pump, but by injecting four pints of tepid water-gruel, followed in an hour by another pint, which had to be injected with some force, owing to some resistance: on applying the taxis afterwards, the tumour was easily reduced.

M. Velpeau gives a good epitome of the treatment of varicose veins by different surgeons. This subject has been a good deal discussed of late, and a great variety of means have been adopted to remove the evil, such as acupuncture as practised by Fricke and Davat, local pressure by Delpech and Sanson, ligature by M. Velpeau, and the obliteration of the vein by caustic by Bonnet, and others. Velpeau, who is certainly one of the most eminent and practical surgeons in Paris, places the greatest confidence in the ligature applied as follows: The patient must be placed in such a position as will render the veins tumid and prominent. "The trunk of the vein is now raised up with the fingers' end, and a pin is passed below the ends of the nails and underneath the vein. This must be done to every dilated vein; eight, ten, twelve, or fifteen pins may be required from the foot up to the knee, but generally only about four are necessary." Each pin is then fixed by twisting a thread circularly round it and drawing it tight: to fix it as in hare-lip does not exert sufficient pressure. The pins and ligatures are not removed before the sixth or twelfth day. It is very questionable, notwithstanding the high authority of Velpeau, whether this is the best means of obliterating the vein, which is the great object to be attained; and although he states his practice to be very successful, we know that the reverse is frequently the case, and dangerous and fatal consequences sometimes ensue. Another mode of obliterating the vein, not referred to in this place by Velpeau, is by applying caustic potass to different parts of the dilated vein at intervals of two or three inches. Two applications of the caustic are recommended by Mous. Bonnet, the first to destroy the skin and cellular tissue over the vein, and the second to obliterate the vein itself; as it has frequently happened that a single application does not actually prevent the current of blood in the vessel, but only destroys

the external parts. The second application of the caustic has been rendered unnecessary by Mons. Laugier's practice of laying bare the vein before applying the potass, and then applying it to the vessel itself. Another excellent suggestion in the treatment of these cases, is that made by Mr. Teale, of Leeds, viz., to apply the caustic not more than two or three inches above the ulcer. This practice has been adopted from knowing that very little good effect is produced beyond the point where considerable anastomotic branches exist, and that the obliteration of a vein by caustic extends only about three or four inches beyond the application, so that it is of little use obliterating a vein for the cure of a varicose ulcer at any point where a large anastomosing branch is given off between that point and the ulcer.

This practice, however, like all the rest, has been attended with occasional inconvenience, such as hæmorrhage, and especially the indolent character of the artificial sore. This is certainly a very serious objection to this mode of treatment, as it occasionally produces a sore as obstinate to cure as the original one. Mr. Joseph Teale has suggested the "immovable fracture apparatus" to remedy some of these evils; and we believe that the equable and continued pressure arising from this treatment has been of the greatest service.

M. Velpeau treats varicocle much in the same way as varix, viz., by passing a needle or pin under the mass of varicose veins, and twisting the thread *circularly* round them; a second needle is passed within about an inch of the first one, taking care not to insert the needles too low or too high up, on account of the difficulty of separating the veins of the chord, and not too near each other for fear of causing the two sores to join, thus forming one large one. When the eschars are detached, the needles are withdrawn from the tenth to the twentieth day.

The usual way to reduce a dislocation has hitherto been to make steady, gradual, and long-continued extension on the limb in a certain direction, but instead of this gradual extension, M. Colombot first places all the muscles surrounding the joint in an intermediate state between flexion and extension, and then takes them by surprise, by suddenly rotating the limb, which almost invariably accomplishes the reduction. Professor Williams, of Dublin, relates two interesting cases in which this plan was tried with success; and this leads us to repeat the observation, that the position of a limb in the reduction of a dislocation ought to form a more important point of the treatment than is generally the case. Position, indeed, is never forgotten by the experienced surgeon, but he often depends more upon his power over the muscles by extension and counter-extension, than he need do if he were to adopt the principle of treatment laid down by Colombot. His principle is to *obviate* muscular power, instead of *overcoming* it.

We see an interesting suggestion made by Mr. Rogers, of Brighton, respecting the formation of catheters with globular tops. He merely suggests that such an instrument would be useful, judging from the success which attended the bougies used by Sir Charles Bell, which were of a similar form. Such catheters have now been in use for at least ten years by one of the most eminent of our provincial surgeons, Mr. Smith, Surgeon to the Leeds Infirmary, who finds them in many cases much easier to be introduced into the bladder than the common catheter. The common catheter, as Mr. Rogers intimates, involves the whole passage, whilst the spherical topped one, having but a limited surface of resistance, glides much more easily into the bladder.

Mr. Bulley recommends, that in cases of iritis, injection of belladonna should be made use of. We have ourselves long been of opinion, with many other practitioners, that belladonna has an excellent effect in cases of this description; at the same time, it would not induce us to neglect the other and more established modes of practice. Mr. Bulley uses twenty grains of belladonna to a pint of water for a lotion, and adds five grains of sulphate of copper occasionally. He first throws the stream on the closed lids for a few times, and when the patient has been a little accustomed to

the shock, he injects the lotion upon the eye itself.

It is well to bear in mind that the French surgeons affirm, that in cauterising the neck of the womb, it is better to use the dento-nitrate of mercury in all those cases where congestion of the womb is suspected, as the nitrate of silver has been found to be frequently followed by hæmorrhage. We should doubt the fact, however, that the nitrate of silver was the cause of the hæmorrhage any more than would be the deuto-nitrate of mercury; and suspect that the same thing would have occurred from any kind of cauterisation, whether by the nitrate of silver or the deuto-nitrate of mercury.

M. Jobert, a respectable French surgeon, has found in the treatment of many cases of stricture that alum has answered his purpose, as well as more powerful applications. He places the end of his bougie for a moment in a candle, by which it is so far softened, that on immersing it in pulverised alum this adheres to the entire heated surface; the point is then rounded off between the fingers, so as to communicate to it a suitable shape. It is then passed into the stricture, and left there for twenty minutes or an hour. Not unfrequently, on the following day, a much larger instrument can be passed.

There can be no doubt that M. Ricord's method of testing cases of syphilis by inoculation is a most valuable means of diagnosis, and ought to be almost invariably adopted, not only on account of the great importance to the patient that his case should be accurately diagnosed, but also from the comparative ease with which the experiment is made. The point inoculated should be covered with sticking-plaster, and not disturbed for three days; at the end of which time the punctured point will be either almost imperceptible, or there will be seen the appearance of a small flat vesicle, containing lymph or pus, surrounded by an inflammatory zone. Occasionally a pustule does not form till the fourth or fifth day. When the inoculation has taken effect, we may be certain the disease is genuine syphilis; and may have recourse to mercury, &c., with confidence, and without loss of time. In order to get rid of the artificial sore, we must freely apply the nitrate of silver, so that the texture may be destroyed to the depth of half a line, which will almost certainly destroy it, and cause the sore to heal. There are, however, some objections to this course. In the first place, it is not certain that the sore is not syphilitic, although the inoculation takes no effect, because the secretion may have been accidentally removed from the surface of the sore before the lancet was made use of for the purpose of inoculation; or the character of the sore may have been altered by escharotics, or by inflammation and sloughing, or the secretion may be changed through time; therefore, it is always necessary, before arming the lancet, that the suspected sore should not have been wiped or dressed with any chemical application for two or three hours previously.

A curious, but a very likely way of curing anteversion of the womb, is related by Dr. Godfrey. The woman was placed on the side of the bed with her head and hands on the floor, and with only the anterior part of the thighs and legs resting on the bed. In this position the intestines were drawn towards the diaphragm, and the pelvis is completely emptied; thus giving the womb free liberty to resume its natural position, being of course assisted by gravitation. In this position likewise the usual manipulations to restore the organ to its proper position might be resorted to more efficaciously.

A rather unusual way of checking hæmorrhage after delivery is that lately practised by Dr. Hecking. It seems, that after a delivery of twins, the womb would not contract; and, after using a variety of modes to induce this contraction, Dr. Hecking introduced a sponge previously dipped in cold water into the womb, and applied it to the internal surface of that organ; as often as it became covered with blood it was removed, dipped again in cold water, and again applied in the same way. This completely succeeded. We see, however, no mention made of ergot of rye, and we must say that this was an important omission; for Dr.

Hecking would have found that this valuable drug would probably have saved him the trouble of applying cold water in the way which he practised. If he had immediately given half-a-drachm of fresh-powdered secale and repeated it in a quarter or half an hour, or an hour, according to circumstances, he would have seen its excellent effects; and if he had anticipated hæmorrhage after the labour from the previous inactivity of the womb, he might have given the secale before the labour with still more advantage. The practitioner will frequently have patients in whom he will always have to fear severe hæmorrhage after labour, judging from the disposition of the womb in previous labours; in such cases he should always give a gentle dose of ergot before the child is born, which will save him much trouble and anxiety afterwards.

Before closing this retrospective summary of the most striking improvements and suggestions which have been published within the last six months, we would advert to the operation of *Lithectasy*, which is published in Dr. Willis's late work on stone in the bladder. It consists in cutting down upon the perineum behind the bulb, and then gradually stretching or dilating the orifice into the bladder, by means of the fluid dilator of Dr. Arnott. It seems to convert the operation in the male into that of the female, from whom we know that calculi of very large size can be extracted, by simple and gradual dilatation; and although this kind of operation has not yet been sufficiently corroborated by experience, we are not acquainted with sufficient contra-indications to prevent its more general trial.

EXTRACTS FROM FOREIGN JOURNALS.

(For the 'Medical Times.')

GERMAN.

Remarks on the Polish Plica occurring in Upper Silesia.—Dr. Lowe states that this disease, formerly very frequent in that country, is becoming daily more rare and mild in its character. It occurs principally in the parts bordering on the Vistula. Dr. L. does not state that it is strictly hereditary or contagious, nor does he attribute it to a scrofulous diathesis; it is, however, most commonly combined with a highly nervous temperament. He then gives the case of a woman, who, after having suffered greatly from intermittent fever, was attacked with plica. She cut her hair, and was immediately affected with pains over the whole body, especially in the extremities, where they were so acute that the slightest touch threw her into a swoon. The skin was dry and hot; loss of sleep and appetite; pulse quick (130) and feeble; there were frequent liquid stools; the tongue was dry, thirst great, urine clear but scanty; blue spots presented themselves over the whole body, and the veins formed hard and blueish cords beneath the skin. The patient died. No *post-mortem* examination was made.

On the sources of Pustules preservative against Variola.—Dr. Lichtenstein states that, after a minute examination into the various sources whence matter is derived for inoculation with a view of protecting the individual against small-pox, such as vaccine matter taken from the cow, vaccine taken from man; variolous matter inoculated on the cow and then re-introduced into the human system; a similar matter found in a cutaneous disease in the legs of horses, as well as in the rot of sheep, &c.; he instituted a series of experiments upon the pustules produced by tartarized antimony. The clear lymph taken from pustules obtained by frictions with tartar emetic, being introduced into individuals not yet vaccinated, produced pustules exactly similar to those of vaccinia. They appeared to be equally protective against variola, and could be propagated from one individual to another, producing pustules perfectly

similar to those of vaccinia, accompanied by the same symptoms. Dr. L. states that, since 1836, he has made 31 vaccinations and revaccinations with lymph taken from the pimples produced by tartar emetic; and that individuals thus vaccinated have been placed in most intimate relations with others affected with variola during an epidemic, without having contracted it.

On fixed intestinal Gout. By Dr. Landsberg.—The object of this article is to explain that peculiar morbid condition of the digestive canal, accompanying this disease, which is characterised especially by obstinate constipation. The symptoms are as follows: after exposure to those causes which commonly give rise to an attack of gout in persons predisposed to this disease, there suddenly supervenes in the midst of the most perfect health, usually towards evening, a desire to go to stool, which the individual is unable to satisfy. Sometimes, however, at the commencement, the bowels are moved, but still the desire continues. The extremities, especially the inferior, become cold; the temperature of the abdomen remains natural; but there is a state of insomnolency and convulsive agitation. The patient experiences a constant feeling of tenesmus; the abdomen becomes tumefied; acute lancinating pains arise which still further increase the convulsive movements of the body; the head and chest usually remain unaffected. The secretion of urine is normal; there is thirst, but no fever; the abdomen gradually becomes so painful that it cannot bear the least touch; in projects as in ascites and fluctuation is manifest; there is often observed in the epigastric region a hard tumour, sensible to pressure; the thirst becomes more intense, and there are frequent eructations, but never the expulsion of flatus per anum; the urine is of a pale red colour, slightly clouded; the pulse is frequent and hard. Abundant cold sweats occur; the tongue is furred, but moist. There is a sensation of pain in the præcordial region; the respiration is difficult, and palpitations of the heart frequently arise. Sometimes there is a difficulty in passing water, as in spasm of the bladder; the eructations become more frequent, and vomitings supervene, but without relief to the patient. These symptoms suddenly supervening in the evening, become exasperated during the night; towards morning, however, a remission occurs, but the constipation continues. The patient feels very fatigued; he is pale, depressed, devoid of appetite, and cannot sleep, even when the pains are relieved. Blood drawn from the vein presents no buff, nor does it produce any improvement; there are no perspirations nor fever. Lavements, purgatives, and antiphlogistics are usually employed without success; the lavements are not returned, nor do the purgatives pass through the bowels. The course of the disease is often intermittent, never periodic; no crisis has been observed. As soon as the bowels become naturally moved, the cure takes place without metastasis to the articulations. The duration of the disease may be from four or eight days to six weeks, and even longer. This disease appears to have the nature of true gout, fixing itself upon the tunics of the intestines, and deranging its functions, as ordinary gout does that of the skin; there also seems to be joined with it a spasm at both extremities of the intestine, at the sphincter-ani as well as at the pylorus. It may, without great care, be confounded with colica pictonum, ascites, tympanitis, invagination of the intestine, hernia, enteritis, retrocedent gout, and intestinal rheumatism. The treatment consists in the employment of anti-arthritic remedies: guaiacum, oxide of antimony, æthiops antimonialis, sulphur, rhubarb, camphor, and ex-

tract of aconite. The main remedy, however, which he recommends, is the alkaline bath, one application of which has sometimes sufficed to dissipate the spasm and induce the normal action of the bowels.

Cure of acute Hydrocephalus by Hydriodate of Potash.—Dr. Ræser relates the case of a child, two years and a half old, in whom he observed all the symptoms of hydrocephalus, even paralysis; the application of leeches, ice to the head, and calomel internally, produced no effect, when he had recourse to the employment of hydriodate of potash, a drachm to half an ounce of distilled water; 30 drops to be given every hour in a glass of water. The symptoms gradually diminished, and the child became cured in the course of some days. But a remarkable circumstance, and which perhaps assisted mainly towards the re-establishment of the little patient, is, that nearly a hundred abscesses, resembling furunculi, and of the size of nuts, appeared upon the head, the neck, and the chest. In a second case (a phthisical child) this medicine had a similar effect. The child, however, ultimately died of phthisis. A third patient (a child seven years of age) similarly affected with acute hydrocephalus, was cured by this preparation and by friction on the back of the neck with tartar emetic ointment, after the failure of all other means.

A new remedy for Hydrophobia.—Dr. Burchardt states that the following remedy, communicated to him by a forester, has succeeded in curing more than 100 individuals bitten by mad dogs. It is to be prepared as follows: Belladonna leaves, 5 grains; oxide of zinc, 1 scruple; æthiops antimonialis, 2 scruples; honey, 5 drachms; electuary of *theriacal*, 10 drachms. Mix. Half a table-spoonful to be taken in coffee morning and evening for three days; the dose then to be increased to a table-spoonful. Take of: Spirits of ammonia, 5 drachms; 10 drops to be taken in a cup of elder-tea, three times a day. Take of: Basilicon ointment, 5 drachms; mercurial ointment, 2 drachms and a half; butter of antimony, 2 drachms; red oxide of mercury, 16 grains; powder of cantharides, 7 grains; pure opium, 10 grains. Mix. This ointment to be applied to the wound, which is to be kept suppurating for six weeks.

Passage of a Biliary Calculus through the Integument of the Abdomen.—In March, 1840, Dr. Klemm was called to a woman, 70 years of age, who had for some time complained of cough and a tumour beneath the false ribs of the right side. This swelling was of the size of a goose's egg, hard, moveable, and adherent to the external integuments of the abdomen: the woman was of strong constitution; no fever existed; the functions were natural; appetite good; colour of the skin and eyes free from the jaundiced hue. Poultices were applied to the tumour, which soon became fluctuating and was opened; nearly two ounces of yellow pus escaped, mixed with blood. Half-an-inch beneath there was discovered a hard body, around which the probe was easily passed, and which seemed to extend two or three inches in depth. On enlarging the wound, this body was extracted, and was found to be a biliary calculus, of the size of a goose's egg, and similar in shape to the gall-bladder. It was of a deep brown colour externally, yellow within, and becoming gradually clearer towards the centre, whence it sent off brilliant crystalline rays in every direction; it was friable, and burned in the flame of a candle emitting a peculiar odour; it was soluble in spirits of turpentine and in sulphuric ether; it weighed six drachms and two grains; its

specific gravity was less than that of water. The patient got perfectly well.

New operation for Nervous Deafness.—Dr. Wolff states that he performed the subcutaneous section of the posterior and transverse muscles of the ear in a case of nervous deafness declared incurable by one of the most celebrated aurists of the day. The success was not immediate; but, in the course of twenty-four hours, there was so much amelioration, that the patient, who before the operation could not hear the ticking of a watch applied against the ear, was able after that space of time to distinguish it at the distance of six inches, the next day at nine inches, and even at one foot, on placing the ear in connection with the watch by means of some hard body. This amelioration did not last long, and the patient, after two days, relapsed into her former condition, upon being exposed to the action of moisture. The vapour *douche* applied to the ear afforded some slight improvement.

IODIDE OF POTASSIUM.

To the Editor of the 'Medical Times.'

SIR,—The efficacy of iodide of potassium, as a remedial agent in the cure of secondary syphilis, cannot, in my opinion, be too highly extolled, as the following, out of many cases, will exemplify:

R—H—, æt. 19, of a scrofulous habit, called on me under the following circumstances: About two months before he had contracted a severe syphilis, for which he was treated by an apothecary, who gave him a box of pills and a bottle of wash; the pills made his mouth sore, but the ulcer on the frænum healed in three weeks. He ceased taking mercury, and considered himself cured; in four or five weeks after he began to feel some difficulty in swallowing, with pains in his legs and forehead. He applied again to the same person as before, who told him he must take more mercury; being unwilling to do so, he came to me for advice. He presented an appearance of great emaciation, could not speak beyond a whisper; he had an ulcer on the velum and right tonsil, with rugged edges and yellow surface, scaly eruption on the scrotum and condylomata. Under these circumstances I determined to use the iodide of potassium. R. Iodidi potassii, ʒij; spt. lavendulæ c. ʒij; mis. camph. ʒviii. M. sumat, ʒi. ter. die. Under this treatment, together with a nitro-muriatic acid gargle, and generous diet, he rapidly regained a healthy appearance; the sores healed, the swelling of the tonsil subsided, and in a month he was enabled to return to his occupation (that of a singer), though he still continued to take the mixture for three weeks longer.—I am, Sir, your obedient servant,

J. BOYTON.

Watlington, Oxon, July 11, 1842.

ROYAL COLLEGE OF SURGEONS, LONDON.

List of Gentlemen admitted members on Friday, July 15th, 1842:—

R. Niblett, R. Cooper, H. D. Fowler, J. Hutchison, E. T. D. Harrison, J. Campbell, P. Mackey, W. Watt, A. Cox, J. A. Powell, C. N. Wilkinson.

Admitted Monday, July 18th, 1842:—

F. F. Loinsworth, R. Dinham, R. Smyth, W. Bennett, H. O. Hawthorn, J. A. Palin, R. Greenhalgh, C. P. Fitzgerald, G. J. Willes, J. U. Easson, C. Colley.

At a Council of the Royal College of Surgeons, on Thursday the 14th instant, Anthony White, Esq., was elected President, and John Goldwyer Andrews, Esq., and Sir Benjamin Brodie, Bart., were elected Vice-Presidents of the College for the ensuing year.

TO CORRESPONDENTS.

A. B.—By recent arrangements, made by the Council of the Royal College of Surgeons, gentlemen who have received all the required Certificates before the 1st of October, will be examined under the old system till the 1st of January next, 1843, and no further; being an extension, in favour of the Student, of three months.

Copies of several petitions and addresses have reached us against the grant of Charters to the two Colleges. They are all well written, and will doubtless tell in their proper place—the Houses of Parliament.

"Probe's Pencilling of Mr. Guthrie"—"Professor Owen's Lectures on the Nervous System," and some Papers, unavoidably excluded from this Number, in our next.

An immense variety of letters and communications have been received, which will be either answered privately, or noticed in our next Number.

THE MEDICAL TIMES.

SATURDAY, JULY 23, 1842.

—Hæc vivimus ambitiosâ
Paupertate!

JUVENAL.

WE mean, this week, to join happily two usually conflicting essences—to indulge our readers with a treat, ourselves with a rest. Writing so much on Medical Reform, it may easily be conceived that it is something to have a leader supplied us for 8d. by the most distinguished of contemporaries; and as the German preacher, whose bad memory brought him to a stand-still, *rode off* (to use a Parliamentary term) on the back of a peal of thunder, solemnly pronouncing "When Heaven speaks let man be silent," so are we tempted to claim a week's indulgence with the exclamation—"When the *Lancet* writes, let the MEDICAL TIMES be quiet." The *Lancet* writes—and on Medical Reform! What visions of calm, dignified statesmanship does the thought conjure up! What magnificent vistas does it open of beautiful argumentations, whose resistless force is only equalled by their essential coherence and lucid order! What a splendid edifice of language does it seem to erect, pure as marble, graceful and elevated as Corinthian columns, in which the excellencies of an Addison mingle with those of a Pope and Burke to give assurance of a perfect writer?

With this impression on our mind—pleasing to our indolence—and with no notion, even the remotest, that thousands of our readers (to whom our *manna* may be growing insipid from its sameness) may have their appetites set anew to us with sharpened edges by a return to the flesh-pots of the *Lancet*, we present the public with the last leader of our accomplished contemporary, elucidated, and enlarged with such short running notes as have been extorted from our devoted admiration:—

The recent announcement of the Secretary of State for the Home Department, in the House of Commons, that it is [was?] his intention, on behalf of the Government, to bring in a Bill to enable the Crown to grant a new charter to the College of Physicians of London, is well calculated to put the question of Medical Reform on

its correct and [by a pleonasm] true foundation. This, then, is the answer of a Conservative Government to the remonstrances and *entreaties* of nearly twenty thousand medical practitioners on the subject of medical abuses, grievances, anomalies, and [what?] PERPLEXITIES! [A rather good specimen this of word accumulation.] Often has it been inquired, "Why some friend of the profession [as Mr. Wakley, for example] in the House of Commons has not asked for leave to introduce a Medical Bill, founded on just and equitable principles, with a view to the establishment of the one faculty system." The only answer that could [ean?] be given to such a question was to be found in the disunion which has existed amongst the members of the profession. In that has laid [lain?] the true reason why no attempt has been made to introduce such a measure. If such an attempt had been made, the disunion in the medical body would have led to its certain and inevitable defeat; it [what?] would have committed Parliament, [!]-by driving that *body* to a precipitate vote,—against the sound principles which such a Bill should embrace, and thus, consequently, there would have been raised a new and an insuperable obstacle to the progress of the great and noble cause which Medical Reformers are so zealously endeavouring to effect. [To effect a noble cause!] This new announcement on the part of Sir James Graham is a thousand times better calculated to promote the success of our just objects than any other [what?] that has hitherto occurred. [An announcement occurred!] Here is a new piece of solemn mockery,—a fresh outrage, an additional assault, on the rights of thousands of highly educated and respectable men,—another gross and scandalous insult offered to the profession, in an endeavour to uphold one amongst the very worst of all the monopolists, to the injury and degradation of the general professional body! What has the College of Physicians done that it should be thus favoured? Is it not proverbial that no institution has more slumbered in the discharge of its duty,—that that College has ever been a temple in which vain boasting, empty conceit, false pretension, and imbecile pageantry have been the leading characteristics of its members and their proceedings,—that from the time of its first institution, in the reign of Henry VIII., down to the present moment, its reputation as a College of Physicians has absolutely been owing to the pursuits, the labours, and the researches of men who were wholly unconnected with the College, but who were seduced and wooed [rather wooed and seduced] into belonging to it after they had become men of fame and character in their profession? [Character and fame.] What has it done as a College? What have been its labours as a Corporation aggregate? When [this is to be read solemnly] and in what manner have the Fellows concentrated their mental powers, [that is a question for them] or applied the capabilities of medical science to the service of the public? What have been their [or Mr. Wakley's] sacrifices in the cause of medical improvement? Let these questions be answered, and then, if indisputably in the affirmative, [what does this mean?] there may appear some ground for the introduction of such a Bill as the one which has been referred to by Sir James Graham. But if all these inquiries must be answered in the negative,—[I don't know, for example,]—if the College of Physicians can be undeniably shown to have been throughout its career a rank specimen of vaunting pride and bootless ambition,—if it has done nothing to benefit the profession, and everything to injure it, [this is coming it strong,] and to cast degradation on the more important portion of the medical fraternity, then we say that the pro-

fession ought to and will rise in a body, as one man, against this newly-contemplated outrage, this last projected insult and attack on its rights, and resist it, [viz., last projected (!) insult and attack on its rights,] both in and out of Parliament, [what next?] to the very last [what next?] EXTREMITY!

The British Medical Association, always alive [this is saying something for it] and foremost in labours of this description, resolved, at the meeting of the Council on Tuesday last, to address both Houses of Parliament, and memorialise her Majesty on the subject, and the following were [are?] the forms of petition that were adopted on that occasion. With slight alterations, to suit the circumstances of each case, these forms may be used by medical societies, medical schools, and the officers of hospitals, infirmaries, and dispensaries, and they may, with equal ease, be made to suit the purposes of private practitioners:—

The notice calling the meeting having been read, to petition the Queen and both Houses of Parliament to postpone granting a charter to any medical corporation till the whole subject of medical reform has [shall have?] been fully considered, a discussion arose as to the petitions, when the following were unanimously adopted:

(1.) That your petitioners have learned that a measure of general medical reform is [was?] announced by your Majesty's principal Secretary of State for the Home Department; and your petitioners believing that such a measure on an enlarged and liberal basis is highly necessary to the health of your Majesty's subjects, and is urgently desired by the great body of the medical profession,

Your petitioners [this gives us the nominative twice over] humbly pray,

That your Majesty will be graciously pleased to defer granting any charter to any medical institution until such measure shall have been brought before Parliament, and has [shall have?] received full publicity and discussion.

(2.) That your petitioners have learned that the right honourable the Secretary of State for the Home Department intends to ask leave of your honourable House to introduce a Bill into Parliament this session to enable her Majesty to grant a new charter to the Royal College of Physicians in London; and your petitioners believing that the granting such charter would prejudice the general question of medical reform, and might be highly injurious to the interests of the great body of the medical profession,

Your petitioners [the same fault again] pray that no measure [may?] be entertained by your honourable House with reference to granting a new charter to the Royal College of Physicians in London; nor [id est, your petitioners prays nor, &c.] that any other measure of partial medical legislation [may] be taken into consideration by your honourable House until the whole subject of medical reform is [shall be?] brought before Parliament, and has [shall have?] received full publicity and discussion.

And your petitioners, &c.

Let all, then, who feel themselves aggrieved by this absolutely unbearable, intolerable, new assault, memorialise and petition, without a day's, without an hour's delay. The petitions need not be written on parchment; that material of course may be used if it be at hand, [how kind] but a sheet of paper will be equally receivable and useful!

The Medical Profession is truly much to be pitied! It contains several of the first writers and most distinguished scholars of the day, and not more than one in a thousand of its members are unacquainted with the rules of Grammar, or with the right con-

struction of an English sentence; yet by some fatality, while the enlightened thousands are silent or unheard, the ignorant units rule an influential portion of the Medical Press, and have the sole guidance of our principal medico-political society—the British Medical Association! Men directing the Press, or governing the public institutions of a *learned* profession, who cannot cobble five lines of English decently together!—the thought is too much for us! But in this unique age, men with deficiencies the most notorious may rise to public posts the most conspicuous if blessed but with a sufficient amount of one fault more—IMPUDENCE!

But, washing our hands of the legislating scavenger of Essex-street, and the ever-verdant Solons of the Scoto-British Association, we must be indulged with one word on the subject for which both have done so little—*Medical Reform*. The notion of conceding new Charters to the two London Corporations before discussing the new Bill of Medical Reform, seemed to us so absurd and monstrous a mode of setting about legislation, that we thought it necessary to institute an inquiry into the matter in well-informed quarters, an inquiry which has satisfied us that the intention attributed to the Home Secretary of State was never entertained by him. *Sir James Graham will not introduce any measure of or on Medical Reform till next Session*. We state this on the strongest and best authority.*

Quid nos dura refugimus
Ætas? Quid intactum nefasti liquimus?

THE Portugal Street Burial-Ground (that oasis in the desert of Clare Market, according to Dr. Todd) is the last resting-place of the much-renowned Joe Miller. A Falstaffian joker (in himself and through others) during life, death seems not to have robbed him of the humbler honour of still exciting jokes in others, and a very contagion of jokes seems to have been communicated by him to his last closely-tenanted habitation. For joke the first, we have a number of grave, learned, and charitable seigneurs erecting for the *cure* of the sick and the *comfort* of the dying, an expensive depot on a spot in which animal malaria is elaborated into a concentrated essence—a corner which may be called the only well-known and indisputably ascertained plague-spot in the metropolis. Joke the second represents this selection as made by “charity and wisdom,”† to serve the united cause of “knowledge and religion.”‡ For joke the third we have hundreds of pious, aye, sensible people, giving annually munificent subscriptions to support so benevolent a scheme, recommended by so judicious a selection. Joke the fourth shows

us the King’s College managers boldly acting thus in the very face of a metropolitan population, at a time when the world is said to be under the empire of public opinion. In joke the sixth we have these gentlemen blazoning forth the selection of such a site for their hospital as a most admirable achievement, giving woodcuts to their subscribers, shewing that 60 out of their ninety windows have the advantage of hanging directly over the grave-yard,* sending a learned doctor to the House of Commons to solemnly declare that “he should be very sorry to see the burial-ground removed, it furnishes so *good*, so large a volume of air!” and publishing declarations in print for the judges of the land, asseverating that the “Situation of the hospital is its very best title to public support!” Certainly there is a fatality about old Joe Miller. Even now we find him *living* in an atmosphere of jokes which, infecting all around, aye, even the learned Dr. Todd, offers the College a due atonement for the atmosphere of death so mercilessly infecting its unfortunate patients.

If the facts we described last week were at all of an ordinary kind, we should rest content with the evidence with which we then sustained them; but there is something so monstrous in the occurrence of such hideous abominations in the centre of a polished capital, under the nose of an eleemosynary establishment filled with the delicate, the sick, and the dying, that we feel it may not be amiss to give, shortly, the evidence of William Chamberlain, a person who for five years was employed as grave-digger in this identical yard. His narrative will set at rest the doubts of those well-meaning correspondents (some being subscribers to the hospital) who cannot believe, that with such horrors and such a neighbourhood before the genry of King’s College, they would deliberately mis-spend their friends’ money in establishing their institution in so grotesquely an improper site:—

Will you state to the Committee what has come under your observation with regard to the state of the churchyards?—In the year 1831 I was first employed by Mr. Watkins, the head grave-digger of St. Clement’s churchyard; from that time till the year 1838 I never opened a grave without coming into other coffins of children, grown persons, and what we term odd sizes, which we have been obliged to cut away, to cut through those coffins, the ground being so excessively full that we could not make a grave without doing it; it was done by the orders of Mr. Watkins, and Mr. Fitch, the sexton of the parish, that those coffins should be chopped up, and the wood placed against the walls and the palings of the ground. We have come to bodies quite perfect, and we have cut part away with choppers and pickaxes. We have opened the lids of the coffins, and the bodies have been so perfect that we could distinguish males from females, and all of those have been chopped and cut up. The ground has been my destruction and my ruin, through the stenehes, and the dampness, and the work I have undergone; since I have been at the

work, I have lost the use of my limbs; I have been in the hospitals and not able to move a limb; I have come out upon crutches; I have been in Middlesex Hospital, and St. George’s Hospital next; I have been in King’s College Hospital since. During that time I was at this work, the flesh has been cut up in pieces and thrown up behind the boards which are placed to keep the ground up where the mourners are standing; the four corners of the board support the platform for the mourners to stand upon, and when the mourners are gone, this flesh has been thrown in and jammed down, and the coffins have been taken away and burnt; I myself have burnt some of them.

You say that you could not open any grave without coming to these coffins?—Not one single grave, not even at three feet from the surface, without coming upon coffins. I filled up one side, all along the houses in Clement’s-lane, during my time; and along by the palings, in the middle of the ground, was so full that we could not get a grave without coming round the sides. During my time, I can, with positive facts, say that above a thousand has been cut away.

If they were quite fresh, what did you do with the bodies?—They have been cut up in pieces. The strings, what we term the leaders of the knees and joints, have been so tough and so strong that we have been obliged to chop them away with a sharp instrument, a hatchet, and the coffin-wood we have been obliged to saw in different parts of it, unless we came to a nail, and then we beat it away with a sledge-hammer. The skulls and bones, there have been holes dug for them, and they have been placed in those holes and beat up just as you would crack nuts, and the marrow-bones the same, and buried.

Have you often come to coffins of people who have lately been interred?—Yes; we could not dig a grave without coming upon coffins that have not been buried twelve months, and some not six months. I was very sorry that ever I was out of a situation, to be compelled to go to such work, but I did it for the sake of my wife and family.

* * * * *

Have you given up this occupation in consequence of its injury to your health?—Yes; it was in the year 1836, in April, that I was first seized, and laid upon my bed; and I lay there six weeks, without knowing what was the matter with me; then I was taken to a hospital in a eab; I was taken first to Bartholomew’s hospital.

Chairman.] Did you feel a degree of compunction when you first began cutting through those bodies which had just been interred?—Yes; I felt very timid, and a great dread of doing so; but having nothing else to do, I did not know what to do.

Under whose orders did you do it?—Mr. Fitch and Mr. Watkins’s orders. Mr. Fitch is the sexton, and Mr. Watkins is the man that employed me first; I have heard Mr. Watkins say to Mr. Fitch, “Sir,” says he, “What shall we do with this?” I have heard him swear, and say, “You must do it; you must remove this wood away.”

Do you repeat the statement, that it is impossible for you to make a grave in that grave-yard now without cutting through the bodies?—Without cutting through the bodies, and many of them perfectly fresh, you cannot get even three feet of grave, nor yet two.

How near is the wood of the coffins to the surface?—There are coffins now within a foot of the surface.

Mr. Yorke.] Can you not go so deep as three feet without finding a coffin?—No, you cannot,

* Since writing the above, we learn that Sir James has announced this fact in Parliament.

† See King’s College Circulars.

‡ See the College Prospectus.

* See the List of Subscribers.

without moving children, or something; the children have been taken out and placed in a grave that is not above a foot and a half deep. Those bodies have been buried on the Sunday before, and then there has been a grave ordered, and those children have been taken out, and if they could not find a grave sufficiently deep just to cover the coffin, a child has been taken out, and the coffin broken up, and the flesh buried. The child has been buried on a Sunday, and then the child has been moved and turned out of the coffin, and sometimes they have been placed nowhere; I have done it by orders.

How soon after the Sunday?—I have taken children up and moved them within a week after they were buried, and placed them in a different part of the ground, not above six or eight inches under ground.

Sometimes, you say, you have placed them nowhere?—I have done away with them.

What do you mean by "doing away with them"?—Breaking the coffins up, and cutting the flesh in bits and burying it.

This is done with the perfect cognizance and approbation of the sexton?—Yes.

In fact, by his order and instruction?—Yes, I have heard him order it. There are instruments kept for the purpose of cutting away coffins; a chopper and a saw. There is no use for those in regard of digging a grave in the middle of the ground.

Do you suppose that there is no place in that burial-ground in which it would be possible to find a place where three feet of depth could be given to a body about to be interred, without interfering with coffins?—There is not, except it is in family graves.

Have you ever been there late at night?—Yes.

Are you ever sensible of any unpleasant smell?—There has been a dreadful sensation of smell, and likewise my clothes and things, when I have gone home; and I have been obliged to put them out upon the landing all night; I could not bear them in the room. I have not been able to bear myself after I have gone home.

* * * * *

Do you like drink?—No, I do not; and I never was a regular drunkard till I took to this business.

And you have almost made yourself a drunkard by force in attending to the business?—Yes, by force; the stench, and the work I had to do, caused me to get the drink.

Did you, when you took the drink, imagine that you were relieved?—Yes, I was relieved for the time, but the stench and the work that I had to go to actually took the strength of the drink from me; and sometimes I went to refresh myself again with fresh drink, the ground was so strong. The ground is a complete body of putrefaction.

We beg our readers to pause and reflect on the consequences, moral and physical, of such a state of things to the delicate inmates of the hospital, who, from sixty windows, command views of the worse, far worse than cannibal proceedings of these wretched grave-diggers. Our space will not now allow us to enlarge on them, but next week we hope to furnish some fresh aspects in which our readers may view the blessings conferred on society by this wisely-governed, agreeably situated hospital of King's College, *alias* the hospital of Joe Miller.

The third meeting of the society of Naturalists of Hungary is fixed to take place at Neusatz and Szatmar on the 4th of next month.

PHRENOLOGICAL ASSOCIATION.

(From a Correspondent.)

SECOND DAY.

A CASE of impaired function of the organ of Language was furnished by Mr. Stark, of Norwich. The patient lost her memory of names for a time, and recovered. Such cases are very common; some of them are accompanied by pain in the seat of the organ; and examination after death usually detects something morbid in it—an apoplectic cell, softening, or some cause of pressure. Mr. Simpson very properly reminded the meeting that Gall pointed out two organs of language; one for merely verbal memory, without reference to the meaning of terms; and one for appreciating the spirit of languages—*philological*. Nothing shows the ignorance that exists of Gall's works in this country, more than the ignorance on this point of most believers in Phrenology. Dr. Spurzheim chose to assert that there was but one organ; though, reversely, Gall's organ of the sense of things he split into two—individuality and eventuality. The English phrenological public, therefore, talk glibly of individuality and eventuality, as if it were as certain as the motions of the earth that there are two such organs, and never speak or dream of the existence of two organs of language. It seemed scarcely remembered by some of the speakers, that in palsy persons are often unable to speak from an affection of the nerves of the muscles of articulation, recognising the words spoken by others and writing correctly; and that frequently the power of remembering words, and the power of articulation, both suffer together.

After this paper was discussed, Mr. Solly demonstrated the brain according to Gall's discoveries. He astonished the audience by prefacing that he thought it right, though he had consented to demonstrate the anatomy of the brain, to protest against this act of anatomical demonstration to the Association being presumed to imply an assent to the opinions expressed by Dr. Engledue the preceding day, from whom he entirely differed. Mr. Solly, no doubt, had his reasons for this strange procedure; but he knew that it was a fundamental law of the Association, read aloud from the chair at the conclusion of Dr. Engledue's paper, that no opinion expressed in any paper read at its meetings was to be regarded as more than the opinion of the individual writer. Mr. Solly's course appears, therefore, to us as absurd as it was little; and, to show his total dissent from Dr. Engledue, he used the following expressions during the very first five minutes of his discourse, no doubt following his own private convictions, and forgetting that he was to dissent from Dr. Engledue:—

"The grey matter produces thought."

"The will that moves the eyes is the brain."

"The will emanates from the hemispheric ganglia."

We shall never forget the looks of astonishment which were exchanged between the members as each of these sentences and others like them fell from his lips. They were instantly noted down by Dr. Engledue, and read aloud by him, with appropriate reflections upon Mr. Solly's course and consistency, as soon as the demonstration was over. Mr. Solly then gave it as his opinion, that the grey matter of the brain is the source of power, (not *spirit*, but *grey matter* observe! not the *recipient* of power, but the *source* of power, observe!) and the white the conductor only; and he gave this opinion as more or less his own. He did not mention Dr. Fletcher's name. He took no notice that in 1836 Dr. Fletcher's Lectures were published in fasciculi; in 1834 in Ryan's Journal; and

delivered with the same doctrines in 1831, and even still earlier. But we possess notes taken by ourselves at his Lectures in 1831. His words are:—"We should presume that the susceptibility of thought will have its immediate seat in the grey matter, or exterior of the brain." "If this view of the matter be adopted, the white matter of the brain must be regarded like the white matter in the spinal system of the nerves, in the light of mere conduits."* Nearly twenty years ago Messrs. Foville and Pinel Grandchamp fancied, from pathological observations, that the superficial grey matter of the brain presides over the intellectual functions.† Mr. Solly expatiated upon the doctrine of the surface and not the whole hemispheres "producing thought;" as though this view were his own. And he made all but his equals and seniors conceive the view was his own, and makes, we doubt not, poor fresh students conceive so, for he lectured in that self-satisfied and magisterial style, which is so amusing to us when we drop into many medical, and especially anatomical and surgical theatres, but which it is out of taste and unwise to adopt when others than the *green* are present. But as to this doctrine of the surface being the seat of the mental functions, Gall so taught; his organs were all seated in the convolutions, which are superficial parts; and the surface is convoluted, of course simply to increase the extent of *surface*. Desmoulins long ago declared that integrity of surface is the only condition necessary for the production of nervous actions; that these are proportionate to extent of surface; and that they are performed by the surface and transmitted from it.* Mr. S. proceeded to propose the application of the word ganglion to the cortical or grey substance of the convolutions. Now this is quite unjustifiable. A ganglion is an aggregated mass; the term is used in regard to the nervous and the absorbent system to signify a lump of substance, so to speak, in distinction from layers, chords, or extended tubes or vessels. To apply it to an extended layer, is to confound all meaning; and after expatiating upon the extreme extension of the grey matter over the surface of the brain, the application of the term ganglion was most conspicuously objectionable in Mr. Solly, who would be better without such originality. What was gained by his term of hemispherical ganglion, we know not. At any rate there is nothing original in the term, for the cerebrum has been represented by some authors as a ganglion placed at the top of the spinal chord. He spoke of the fibrous nature of the septum lucidum as a positive discovery of his own. But, in the first place, Gall describes all the white part of the brain, and therefore the septum lucidum, as fibrous: white and fibrous are with him synonymous terms. In the next place, these are Gall's words, at p. 313 of his *Anatomy*: "Of the septum lucidum. No one has yet described the true relations of these two *fibrous* layers, though they have been known ever since the time of Galen;" "a *fibrous* band issues each middle lobe, &c., ascends, &c., spreads out and constitutes with its fellow of the opposite side the *septum lucidum*." Mr. Solly professed to be the author of several other novelties.

We must not, however, omit a little circumstance that occurred after Dr. Engledue had exposed and commented upon Mr. Solly's inconsistency. Dr. Elliotson rose and playfully censured Mr. Solly, by presuming that in consequence of Mr. Solly's feeling it imperative to assure the company that his demonstration of

* See Fletcher's Rudiments of Physiology, Part 3, pp. 99, 100.

† See Dr. Spurzheim's Anatomy of the Brain, 1826.

‡ See Dr. Elliotson's Physiology, p. 307, 5th ed.

the brain did not imply his agreement with the opinions of Dr. Engledue, it would be proper for him as he attended the meetings of the society, to make also his profession of faith; and he therefore declared his assent to every syllable of Dr. Engledue's powerful, philosophical, and philanthropic Address. Before hitting Mr. Solly, he thought it right, we suppose from high courtesy, to perfume his hands, for he preluded with a compliment to Mr. Solly for introducing Phrenology into the Anatomical and Physiological part of the School of St. Thomas's Hospital, adding that he himself left St. Thomas's Hospital in 1834, died, as regards St. Thomas's Hospital, without seeing Phrenology introduced.

On this a person, whose name we understood was Streeter, rose and said, that, although it was not introduced in Dr. Elliotson's time, yet he had frequently talked in St. Thomas's Hospital with Mr. Solly upon Phrenology, before Dr. Elliotson's resignation; so that if it was not introduced, still it was finding its way into the School. What he meant we are at a loss to conceive, except it were that he was the means of introducing it. Upon this Dr. Elliotson rose, and expressed his utter inability to divine what Mr. Streeter meant by half denying his statement; for if it were finding its way in before Dr. Elliotson's resignation, it certainly had not found its way, as Mr. Solly never taught it, often smiled at it, and many more than one teacher opposed it before the pupils. As to its beginning to find its way, added Dr. Elliotson, "*Invariably taught the truth of Phrenology, gave a sketch of it, and considered insanity phrenologically in my lectures in the Hospital, from the first season I lectured there in 1826. In the year 1817, when I was appointed physician to the Hospital, I defended Phrenology in the 'Annals of Medicine and Surgery'; and in 1820, in the third edition of my Translation of 'Blumenbach's Physiology.'*" Thus early, therefore, Phrenology was finding its way into St. Thomas's. Mr. Streeter wisely said nothing.

THIRD SITTING.

A Dr. Brown read a paper upon Hope. Its character was imbecility, and we must express our surprise that the committee allowed such a paper to be read. Mr. Deville followed with illustrations of the uniformity between the size and shape of the brain, and the exterior of the skull. The poor man should not be allowed by the committee to make his annual exhibition. His proper vocation is to sell easts and hold his tongue.

Mr. Hawkins exhibited his new and ingenious instrument for taking the dimensions of the head. It consisted of three branches, two of which formed the ordinary callipers, but with the addition of a screw, which could be so adjusted as to allow of the instrument being opened (and thus to remove it from any region of the head, after adjusting it to the width of the part) and returning the branches to the precise spot, thus enabling the operator to ascertain the required breadth, by laying the callipers on a rule. The third branch could be made to open at a right angle with the other two, and was provided with a similar adjusting screw for measuring the depth from any spot in the mesial line to any part of the sides of the head, to the external meatus, for example, by placing the two balls at the extremities of the callipers in the external openings of the ears, then bringing the ball of the third branch to the spot whose measurement was required, and, after adjusting the screws, taking off the instrument and laying it upon a rule graduated for the purpose. It is not easy to give an intelligible description of the instrument, which, however, is extremely simple in its application, can be

folded into a very small compass, and is altogether the most perfect thing of the kind we have seen. Mr. Hawkins stated that it had taken him 27 years to bring it to its present state of perfection, but it would be unnecessary for him to point out the successive improvements he had effected upon the old modes of ascertaining various measurements of the head, as he had demonstrated these at the last session of the Association.

FOURTH SITTING.

Mr. Atkinson read a paper on Mesmeric Illustrations of Phrenology. He detailed cases of persons uninformed in Phrenology, pointing when, in the Mesmeric state, to the portions of the head where the phrenological organs respectively reside, accordingly as one faculty or another was active, thus removing the force of Mr. Lockhart's objection, in a late number of the *Quarterly Review*, that we never have sensations when the different organs are at work: and cases in which the various faculties were excited, or sent to rest by mesmerising or demesmerising over the seats of the respective organs. It was a most important communication; but after the reports we gave of the proceedings of the Phrenological Society in our journal (May 14, No. 138) and Dr. Elliotson's communication in the 144th, we shall not enter further at present into the subject.

We shall only remark that a Mr. Hytch, Dr. Moore and others showed how little Phrenology had improved their minds. But they were well answered and set down.

FIFTH SITTING.

Mr. Cull read a paper to illustrate the organ of Music, but we are not aware of any novelty in it worth laying before our readers.

Mr. Simpson gave an address to prove the Wisdom and Power and Goodness of God from Phrenology, and was warmly eloquent upon Amateness.

SIXTH SITTING.

At the sixth and last meeting a paper on Insanity was read by Dr. Davey of the Lunatic Asylum at Hanwell, and one by a Mr. Hytch, on the Love of the Past. These we shall speak of in our next number.

[We wish to have it understood that there are some opinions expressed by our able correspondent, in which we are far from concurring, and that if Mr. Solly thinks himself at all harshly used, our columns are freely open to him.—ED.]

To the Editor of the 'Medical Times.'

SIR,—My attention has been directed to an article in the *Lancet* professing to give an account of the proceedings at the first meeting of the Phrenological Association for the present year; but in reality, so grossly misrepresenting what took place on the occasion, that I have resolved to beg the favour of the use of your columns to make a few remarks in reply.

No one will have much difficulty in tracing, in the animus that dictated the narrative of your contemporary, the effect of a fit of spleen and choler, caused by the unvarying circumstance that the science he has taken to himself so much credit for slaying should not only have been so unaccommodating as to refuse to give up the ghost, but actually had the assurance, in spite of the verdict of a coroner, to rear her forbidden front in the centre of the Phrenological Association. Indeed, his ill-disguised mortification and irritation at the event is so excessive as to betray itself, even on his title-page, where the reader will see the article in question re-

ferred to under the classical title—"Attempt of the Okeyites to ruin the Phrenological Society."

Of the taste which induces a Journal, professedly scientific in its character, to employ ridicule and nicknames towards those engaged in the investigation of a class of phenomena of surpassing interest in every point of view, but especially claiming the attention of the physiologist and the physician, promising as it does to unfold the most curious and important page in the physiology of the nervous system, there can be but one opinion, and Mesmerists can well afford to smile at such truly impotent attacks, since it is quite certain they are ultimately more likely to ruin the periodical that contains them, than injure the science against which they are levelled.

With regard to the propriety of the subject of Mesmerism being introduced at the meetings of the Phrenological Association, there cannot be a doubt that the general consideration of the question would be foreign to the objects of the society, and disapproved of by every member. On the recent occasion, however, Mesmerism was not made a subject of special consideration, but merely introduced incidentally with reference to the excitation of the cerebral organs when in a state of sleep-waking; and, in my opinion, the society could not have refused to hear the facts some of its members wished to detail on this head, without stultifying themselves as a scientific body, and running counter to all those opinions in unlimited freedom of inquiry and discussion, which it has hitherto been their pride to uphold. As well might a society of chemists refuse to test the accuracy of the results said to be obtained by some new method of analysis, because it had never been employed before, as Phrenologists, refuse to investigate certain alleged facts with regard to the excitation of the cerebral organs, because obtained by means of an agency, the existence of which a set of arrogant and presumptuous smatterers in science have decided *a priori* to be impossible.

It would be foreign to my purpose, on the present occasion, to enter into an examination of those portions of Dr. Engledue's eloquent address referring to materialism and the responsibility of criminals. I shall content myself with observing, that since his opinions on these points coincide in substance with those occasionally promulgated by the *Lancet*, it rests with that Journal to show why they are more to be reprobated, when held in conjunction with the belief in Mesmerism, than when they appear in its own pages.

The observations regarding the vote of thanks proposed to Dr. Engledue, are a gross misrepresentation of what occurred. It is not true that many opponents had left the room before it was put to the vote; and, so far from there being any difficulty in carrying it, as insinuated in the *Lancet*, only two dissentient hands were held up, whilst an amendment proposed by the practical Phrenologist it refers to (who, by the by, is so fond of being in opposition as to impede the progress of the proceedings of nearly every public meeting he attends,) fell to the ground for want of a seconder.

I cannot conclude without observing that sad indeed is the effect of prejudice, when the introduction of one obnoxious topic is sufficient to blind the mental vision to the value of everything with which it is associated, and the only effect produced in an auditor by an address teeming with the noblest aspirations and the most philanthropic views, and adorned by eloquence of no ordinary character, is a disposition to carp at and misrepresent it.—I am, Sir, your obedient servant,

T. S. PRIDEAUX.

Southampton; July, 1842.

MR. GUTHRIE ON POOR-LAW MEDICAL RELIEF AND MEDICAL REFORM.

To the Editor of the 'Medical Times.'

SIR,—I beg leave to place in your hands, for publication in your Journal (if you please to insert it), a copy of a letter I have received from the late President of the Royal College of Surgeons, on the subject of Medical Relief under the Poor-Law Amendment Act.—I am, Sir, your obedient servant,

THOMAS HOVELL.

Clapton, July 18, 1842.

4, Berkeley Street, Berkeley Square, July 15, 1842.

DEAR SIR,—In my letter of the 12th of March I gave you some explanations of the medical order of the Poor-Law Commissioners, for the better payment of the medical officers of Unions for what is called their extraordinary services; and I assured you that my endeavours should be continued, with the view of effecting a change in the manner in which they were paid for their ordinary services. I have now the pleasure to acquaint you, that these efforts have been successful, and that the Secretary of State for the Home Department (Sir James Graham), and the Senior Poor-Law Commissioner in London (Mr. Lewis), have been pleased to accede to the suggestions I had the honour to make to them on the part of the Council of the Royal College of Surgeons on this point. Sir J. Graham intimated his intention to propose them to the Government, to state them in Parliament, and to have them carried out under the Act now awaiting the sanction of the Legislature. The act of grace and favour which they will thus bestow upon the Medical Profession will be most important, as it will complete the emancipation of its members employed under the Poor-Law from the degradation to which they were obliged to submit under the existing regulations. It will, together with the medical order of March last, obtain for the poor that strict and good medical advice and assistance, of which I fear hitherto they have had rather the semblance than the reality; and I can assure you that the Secretary of State and the Poor-Law Commissioner only yielded their assent to my observations on their being convinced that the grant of an additional sum of money equal to that already paid for the medical relief of the poor was absolutely necessary for their comfort when suffering from the misery and distress which sickness must always bring with it, and which an insufficient medical attendance may render permanent. The details of the measure thus nobly granted by the Secretary of State and the Poor-Law Commissioner, as much, indeed more, for the benefit of the poor than of the Medical Profession, will be in proper time explained by them. I have also the satisfaction of assuring you, that I have spoken to many Members of both Houses of Parliament, of different political sentiments, on this subject, and they have all assured me, in the strongest manner, of their determination to support the Secretary of State in any thing he might think fit to recommend in furtherance of this object. In thanking you for the kind manner in which you and the other members of the deputation have been pleased to express yourselves towards me, for the interest I have taken in this matter, I assure you that I do not feel that I have deserved more than the very ordinary reputation of doing what I felt to be a duty. I have been very fortunate in having some private influence with Mr. G. C. Lewis, which has enabled me to press my representations in a manner which I could not otherwise have done; and I am thankful it has been of use. The pains I have bestowed upon the object which is now, I trust, about to be at-

tained, are only a continuation of that interest I have felt it my duty more particularly to take in every thing relating to the profession of Surgery, since I became one of the governing body in London in that department of medicine. On my appointment to the Council of the College of Surgeons, I devoted the first year to the examination of its records and its regulations, with the hope of being able to assist in rendering it what it ought to be—one of the greatest and most useful institutions in Europe. My early education with men of all ranks, characters, and opinions; the necessity in which I found myself placed of controlling, and sometimes governing large bodies of men, at an age when many had scarcely begun to learn obedience, taught me that strict fairness, honesty, and justice, were the principal means by which this was to be effected. I brought these opinions with me into the Council of the College of Surgeons; and after I had made myself thoroughly acquainted with its rights and privileges, as well as with its defects, I applied myself to the removal of all the various grievances and abuses which had crept into the management of its affairs, or were incidental to its constitution, and not adapted to the spirit of the times. My elder brethren, all since dead, did not receive these efforts very kindly; they pronounced me to be a greater radical than even Mr. Joseph Hume, and declared that they would not sit at the same table with me if they could avoid it.

These opinions, much as I respected the private virtues and acquirements of my colleagues, did not influence me much on points in which the public was concerned; I steadily pursued my objects, and year after year have proposed and re-proposed, and when beaten have returned again to maintain my opinions, until now, when retiring from the office of President, I can fairly say there is not one abuse or grievance remaining. I believe I may say that much has also been done for the advancement of science, for the improvement of knowledge, and that little or nothing has been left undone which can give personal ease, comfort, or satisfaction to the members of the body generally.

I might, if I pleased, congratulate myself upon being, and having been, the most successful reformer in the profession; although I admit that many have talked, and written a great deal more about abuses and grievances than I have done, but no one has had the good fortune to remove so many. I apprehend, however, that the word reform does not bear, with many gentlemen, the same meaning as is usually attributed to it, and with them it is understood to imply destruction, or the subversion, not the reformation of the existing order of things, in which sense I am not a reformer, for I am not a destructive. Having on eight different occasions taken a solemn oath to preserve and maintain the honour and integrity of the College, it has not occurred to me that the best way of doing this would be by aiding in the establishment of one faculty, or any other society, by whatever name it may be called, which would interfere with the utility, the rights, or privileges of the College of Surgeons, and end in its destruction. Although I have not supported any of these schemes, and have expressed my determination to resist them whenever officially called upon to do so, I have not yet had occasion to say one word on the subject, having never met with any one member of any Government who did not at once declare them to be visionary, and that they had themselves never thought of subverting the existing ancient medical institutions of the country, however earnestly desirous to see them undergo any alteration and improvement that could tend to the advancement, honour, and character of the profession.

It has been urged against the Council, that it is self-elective, and its Examiners are appointed for life—two points which it is not in the power of the Council to amend, without an alteration of their charter; and in the year 1834 a supplemental charter and ordinance were prepared, and steps taken by the Council of the College to obviate these evils, and to appoint Examiners in Midwifery. These improvements were deferred in consequence of the introduction of Messrs. Warburton and Hawes's Bills into Parliament, which, if they did no more, have at least prevented the Council of the College from trying to effect these desirable objects. I will not relax in my efforts while anything remains to be done, which, in my opinion, is likely to be advantageous to the public and the profession; and I shall be at all times happy to advise with you or any other gentlemen who may think my services likely to be of use to them.—I am, my dear Sir, very faithfully yours,

G. J. GUTHRIE.

To Thomas Hovell, Esq., Sen. Member of the Deputation from the Surgeons of the London Unions to the President and Vice-President of the Royal College of Surgeons.

DISLOCATION AND FRACTURE—THEIR NATURE AND TREATMENT.

By J. NOTTINGHAM, Esq., Surgeon, Liverpool.

(For the 'Medical Times'.)

As any practical recollections of the characteristics of disease or accident, and especially of such forms as are rare, must have some value, if correctly reported, I will not further apologise for offering the present and future papers on the subject of dislocation and fracture for the pages of the MEDICAL TIMES. It will, perhaps, be objected that they are given without method, which indeed, in the ordinary sense of the word, will be true, but I have always thought that the surgeon does better who gives a good foreground to the picture of his cases, making the objects which struck him most prominently to stand out, for this will more than make up for a neglect of the perspective, or a want of methodic detail in filling up, in which there is often more of copying than originality; for after all, as far as the description of dislocation and fractures is concerned, it is the effect produced by the principal symptoms or leading features of the case that impresses the mind, and remains in the memory, while all the advantages which some might hope to derive from an extensive summary of details, although they make a good figure in a notebook, are but ill-entertained elsewhere, and have not in reality that practical value which we sometimes flatter ourselves they possess.

In this first communication we have attempted to give some directions for choosing the most favourable time for surgical interference, especially in cases of dislocation; for although it would seem that every fracture and every dislocation should be reduced as soon as possible, yet there are certain exceptions to the general rule; and again, there are occurrences where it is of especial importance that it should be strictly applied. It will generally be the best plan to remove the patient from the locality of the accident to that where he is destined to remain during the progress of the treatment before anything is done; yet, as an exception to this rule, there are cases where the surgeon may find it desirable to do something on the spot, for the purpose of affording more immediate relief; as, for instance, in cases of dislocation of the shoulder-joint, and this especially where we have sufficient force at hand to make the extension and counter-extension; where the patient is not strong or muscular, and the pulleys not essentially necessary; where

he is fainting from the effects of the fall or injury, or where we find him in a state of intoxication; for the condition of muscular feebleness, of fainting from the shock, or from hæmorrhage, or that of intoxication, are all favourable to easy reduction of dislocations, and this it will be well to remember, as far as the shoulder and hip-joints are concerned; for in ordinary circumstances, and in people of ordinary strength, the reduction of such dislocations requires the employment of considerable force, and the help of intelligent assistants, which are not at all times easily met with. Having alluded to the dislocation of the shoulder as one which it may be desirable occasionally to reduce on the spot, it may be well to add that cases sometimes occur, where such plan of treatment appears to be advisable in dislocations of the hip, an instance of which I saw some time ago, where a boy of 13 met with dislocation of the hip-joint, rather towards than upon the dorsum of the ilium; yet the position of the great toe, of the foot, and knee sufficiently indicated the nature of the injury. In this case, gently taking hold of the ankle, and rotating the limb outwards, making slight extension at the same time, sufficed to slip back the head of the bone into the acetabulum, over the edge of which it appeared to have passed and no more. Whether anything peculiar in the condition of the ligamentum teres favoured more or less this easy reduction, it would perhaps be difficult to say; but certain it is, that if the patient had waited for any considerable time before surgical aid had been obtained, it is very probable that the traction on the bone by the glutei muscles would have produced a greater displacement and more complete dislocation, the reduction of which would have been effected with greater difficulty.

Before proceeding to the consideration of other divisions of the general management of broken bones, we will shortly notice a few more cases where the immediate reduction of dislocations is demanded, and then introduce by way of contrast a sketch of certain circumstances, where the putting off of reduction for a few hours appears desirable.

First, with regard to cases of dislocation of the hip, it appears from that of the boy just noticed that we may now and then meet with a sample of that which might be regarded as incomplete dislocation, the partial nature of which favours its immediate reduction, and to lose time in such a case would be bad management, and that for very obvious reasons.

In the ordinary form of dislocation on the ilium, into the foramen ovale, on the pubes, or into the ischiatic notch, if we have the good luck to find the patient, who may happen to be a strong man, exceedingly faint, or exceedingly drunk, let no time be lost, for if he recover from his faintness, or become sober, depend upon it reduction will be much more difficult. It is to be recollected, however, that in a state of extreme collapse, where any additional injuries complicate that to the hip, the surgeon will proceed with such caution as the circumstances evidently require; for at this moment there is present to my mind the case of a man who was brought into the Liverpool Infirmary in such a state, and who appeared at first sight to have dislocation of the left hip; he was faint, and one might have deemed it prudent to reduce the dislocation immediately. We inquired, however, about the manner in which the accident happened, and thus determined the peculiarity of the circumstances. It was found that a very heavy body had fallen upon the pelvis of this man, which at once rendered it possible that fracture was co-existent; and such was found to be the case, for the limb of the injured side could with tolerable facility be brought on a

level with the opposite, and could be held there with the hand, but when let go it resumed its former position of displacement. This poor man died on the following morning: a careful *post-mortem* examination of the body was made, we found fracture of the ilium behind (near its symphysis with the sacrum), of the pubes in front, and of the acetabulum at the side. The symptoms of apparent dislocation were the result of the fractures, especially of the acetabulum; the injury of the soft parts within the pelvis was extensive and serious, and any immediate attempt to have reduced the supposed dislocation, would probably, in this case, have produced the more immediate death of the sufferer. We have already noticed the chief circumstances which are favourable to the early reduction of dislocation of the hip, and will only mention, in addition, that as far as the aged are concerned, it is seldom, if ever necessary, to wait longer before the parts are put into their natural condition than may be requisite to favour the recovery of the probably feeble patient from a state of collapse, which we look upon as greater than that which, for the sake of brevity, we might call laudable fainting.

I remember one case of the rare dislocation on the pubes in a very old gentleman, which was reduced with very little difficulty, and apparently very moderate force. Extension was made with the pulleys, and the upper part of the limb manœuvred and drawn outwards and downwards by a round towel passed inside the thigh, the head of the bone at once slipped into the socket; but the details of such a case are not of much importance, and will be sufficiently adverted to, when we afterwards speak of the reduction of dislocation, when it matters not much whether we reduce immediately or delay the attempt a little while. The aged patient in question was nearly 90, and of course the muscular tone but feeble. The injury was caused by a fall down two or three steps of the stairs. In a female of the same age it is probable that fracture of the neck of the thigh-bone would have been the consequence of such an accident.

In the second place, we may shortly allude to the occasional importance of early reduction in cases of dislocation of the shoulder, in illustration of which the following case may be related:—On the 18th of April last I was called in the night to see a gentleman in Liverpool, who had been to visit a friend at a little distance from the town, mounted on a spirited and ill-tamed horse. This fiery steed ran away with him on his return, galloped into town, and threw his rider in the middle of the street. On my arrival I found this gentleman had suffered from concussion of the brain and nervous system, and that the left shoulder was dislocated. Apparently owing to the shock which the nervous system had received, the contraction of the muscles about the dislocated shoulder was not at all of a firm character, the snap of the deltoid was soft and yielding, although the patient is a very strong man.

I immediately placed him on the floor, passed a little pillow into the axilla, to which cavity the head of the bone was dislocated, had the neck and the legs bent towards the opposite side, and held by one assistant, while another extended the dislocated arm, and with a moderate pressure on the pillow with the heel of my left foot, the dislocation was reduced.

This I consider to have been effected much more easily than it would have been after the effects of the shock of the nervous system had subsided, and the muscular contraction had begun to declare its power. I have more than once reduced dislocations of the shoulder in men in a state of intoxication with a facility equal at least to that which was met with in the case

just related, and which depended entirely on another cause, namely, concussion of the nervous centres; so that we may readily understand the importance of seizing in such circumstances those *mollia tempora agendi*, which will often last but for a short time, and whose loss we might have good reason to regret.

We now proceed to say a few words about the question, as to whether or no, in some cases of dislocation of the larger joints, it may not be desirable to wait awhile before reduction be attempted?

And here, as before, let us take a view of the circumstances of a single case, which may afford materials for general illustration:—Monday, Nov. 27th, 1836, Thomas Hughes, æt. 25, a healthy and strong man, dislocated his hip, by falling from a plank upon the wet and slippery surface of the deck of a vessel; we attempted to reduce it the same evening, and failed, although bleeding, the warm-bath, and tartar emetic, were employed to reduce the muscular resistance for the time; even the pulleys were unavailing. On the following day the reduction was readily effected, with the employment of the same mechanical means which had failed the previous evening. In this case the view taken of matters was simply this; that by waiting, the muscles attached to the upper part of the thigh-bone had been allowed to tire themselves thoroughly by their unusual contraction, and that they would be more easily overcome in such a state of fatigue is very evident.

In a second case, more or less analogous, a strong man with dislocated shoulder came under my care; attempts had been made to reduce his dislocation, but without effect; not thinking it desirable to be in any hurry, as the suffering was not great, he was allowed to remain quiet until the next morning, when the reduction was easily effected.

I saw a little time ago a striking instance of this kind, where four or five surgeons in succession had failed in replacing a dislocated humerus; when another surgeon being applied to, had the lucky advantage of the favourable time, when the muscular apparatus of the joint was fatigued, and readily succeeded in reducing the dislocation.

It appears to me that in cases where pulleys are not at hand, and where we meet with dislocations of the hip or shoulder in very strong men, that the plan of waiting awhile before reduction is attempted, will often be found to be a very good one. If, however, the suffering attendant on the dislocation were extreme, and important blood-vessels or nerves appeared to be much pressed upon, we must be guided in such circumstances by important features of the case.

Whether, however, we reduce the dislocation immediately, or whether we deem it prudent to wait for a time, the object is essentially the same—to seize that opportunity for reduction which is rendered favourable by the condition of muscular feebleness—and thus we shall not often have occasion for the employment of the lancet, tartaric emetic, or the warm-bath, if we watch attentively the condition of the muscular fibre, and the modifications it often undergoes within a moderate space of time.

(To be continued.)

Mr. Melmon, the naturalist sent by the French government to Cayenne, has just returned to France, with a large and beautiful collection of rare plants for the Jardin des Plantes. He has also brought over some large banded snakes, and an amphibious animal called the Cabiai, never before known in France, which will likewise be deposited in the National Museum.

HOSPITAL REPORTS.

ST. GEORGE'S.

Femoral Aneurism.

John Ward, æt. 45, admitted November 10, 1841, Harris Ward, under the care of Mr. Babington.

History.—By occupation he is a navigator, and has been used to dig and wheel about earth, and also to lift heavy weights. This heavy work necessarily required him to take several pints of porter daily, and independently of this he has been accustomed to drink freely. Usually he has enjoyed good health. Seven years since he was in this hospital with rheumatism, but he forgets under whose treatment he was paced; has suffered little or nothing from this complaint since his discharge. Occasionally he has rheumatic pains flying about him. He is not nor ever has been subject to palpitation, or any of those symptoms which indicate valvular disease of the heart or coronary arteries. About a month ago he felt a sudden sharp pain just below the right groin, induced, as he supposed, by lifting a sack of potatoes, and his attention being called to it he observed a swelling about the size of a pigeon's egg. It beat, he says, from the first, very violently, and he felt at the time of the accident very faint. The tumour since its first appearance has gradually and progressively increased in size and in the force of its pulsation; little impediment was caused to the various motions of the limb.

Mr. S., at B—, examined the swelling, and without doing anything either locally or constitutionally, advised him to come directly to the hospital. His bowels are opened regularly two or three times a-day, and his appetite is good; he sleeps well, and is not disturbed by the pulsation. Pulse full, perfectly regular. There has never been any œdema or swelling of the leg; the temperature can scarcely be said to be below the natural standard.

Present appearance.—There is a pulsating tumour about an inch and a half below Poupart's ligament, and over the course of the right femoral artery. When the fingers are pressed upon it they are alternately raised and depressed, and according as the pressure is increased so does this pulsatory motion become more evident. The tumour cannot be diminished by applying an equal degree of pressure on all sides. On listening with the stethoscope, a loud, boisterous sound is heard, resembling the diseased sound produced by a dilatation of the ventricles. A whizzing noise may also be heard by first stopping the circulation through the artery, by pressing on the external iliac, and then readmitting the blood into the emptied pouch. As the sac becomes full the sound is lost, and the original one returns.

November 10. He was ordered to bed, and put upon broth diet.

11. Broth diet, recumbent posture.

12. Ordered to be bled to 3x. He felt somewhat faint from the abstraction, and the pulse was reduced in force and frequency. The blood was not buffed or cupped.

13. Put on ordinary diet. The pulse is equable; less action in the tumour and general circulation. Mr. Hawkins examined the tumour, and gave his opinion that the aneurism formed an oval pouch, which ascended above Poupart's ligament to the extent of about half an inch. The tumour was not to be touched oftener than necessary by the students, as an operation was contemplated.

14. To continue his diet; Mr. Babington expressing his conviction that it would be better to keep up the usual amount of circulation, and to lessen irritability, should it arise, by purging and bleeding.

15. Mr. Keate and Mr. Talim examined the aneurism; they coincided in the opinion, that it extended in an oval pouch under the ligament. The external iliac was conceived to be sound. Ordered to continue quiet; a repetition of the blood-letting has not been thought necessary.

16. Much the same. There is less colour in the cheeks. He was put on fish diet, and ordered to be bled again to 3x. as the pulse seemed to indicate a rather more than ordinary fulness, and the heart's action was somewhat excited. Before he lost four ounces he evinced a disposition to faint, and the blood only came in a small stream. It was not found necessary to repeat this late in the evening, as the pulse was more quiet.

17. Pulse regular and soft, not exceeding sixty per minute. Countenance serene. Mr. Walker and Mr. Cullen examined the patient; Mr. W. coincided in the opinion of Mr. Hawkins, that it went beneath Poupart's ligament, and that the artery above is sound. The operation was pointed out to the patient as being the only means of saving his life, but he refused to be "cut," and stated his willingness to resign himself to his fate.

18. Much the same. The tumour is not in the least painful to the touch. He persists in his determination. Broth diet.

Haut. Salin. 3iss.

Mag. Sulph. 3i.

Tinct. digitalis, m. x. bis in die.

19. Still resists the advice given him. In health he is much the same. The tumour Mr. Babington conceived to remain stationary. He makes plenty of water, which is slightly acid, and not albuminous.

20. Bowels well opened. The medicine does not produce any effect upon him. Pulse sixty; soft, and agreeable.

22. The medicines have caused some sickness; they are to be omitted to-day.

24. He left the hospital to-day, fully aware of the consequences, and against the earnest persuasion of all the surgeons.

I visited him a month after he left. The tumour had not much increased in size, but had extended somewhat under Poupart's ligament. Six weeks after this I again saw him at his residence. He had been living very abstemiously, and all exertion had been strictly forbidden by his medical attendant. The tumour had augmented visibly in several directions. He occasionally felt a sensation of water trickling down the inner part of the thigh, but experienced no pain in the tumour or neighbouring parts.

March 15. The patient came to see Mr. Babington at the hospital; the tumour was augmented in size, and had extended more under the ligament. He appeared to be in good health, and experiences but little inconvenience from it. There does not now seem to remain a chance for the operation to be performed, as he stubbornly refuses to risk his life on the operation, whilst the disease is advancing day by day to his destruction.

Strangulated Hernia.

William Woodward, æt. 71, admitted under the care of Mr. Cæsar Hawkins, November 28, 1841 (Harris Ward). It appears, on Wednesday three weeks he had a fall (to which he is frequently liable, in consequence of having fractured his right patella at some former period, and the ligamentous union being about three inches in length,) of some severity on the loins, and at the same time felt a strain in the right groin; he did not have any motion for a week after this accident, and finding that the tumour became red and painful, he applied to the parish doctor, who gave him some opening

medicines. He neglected to see any one for a week, and then he had vomiting, obstinate constipation, pain, and tenderness of the abdomen; the hernia was tried to be reduced, and enemata and opening medicines given. He was advised to come to the hospital on the Thursday previous to his admission (Sunday), but could not be prevailed upon.

Present State.—Countenance extremely anxious; tongue much furred and brown. There is a swelling in the right groin, extending from the anterior inferior spinous process to nearly the insertion of Poupart's ligament, this is of a dusky-red, and pits on pressure; the redness is circumscribed. Tapping the tumour elicits a dull sound; coughing gives a pulsatory sensation to the finger. Another hernia exists about two inches above the umbilicus; is reducible, but not tender. The intestines are loaded with wind and fæces, which give a tense appearance to the parietes; stercoraceous vomiting is present, and extremely frequent.

28. 2½ P.M. Mr. Hawkins, after examining the part, ordered him into the operating theatre, and there the following operation was performed:—An incision three or four inches in length was made in the centre of the swelling, in the course of Poupart's ligament through the integuments and cellular tissue, which beneath was extensively infiltrated with pus and lymph, and gangrenous to some distance. This incision was continued partly by the fingers, and partly by the director and scalpel. A few drops of pus were now seen amongst the cellular tissue, and entangled in its meshes. After a few shreds of muscular and cellular structure had been divided on the director, a glistening surface was exposed, in shape and colour resembling the intestine. The fingers of the operator were passed round this, and after minute examination it was discovered that this was merely the outer covering of the sac; it was consequently laid open by one incision, which exposed the omentum underneath; it was in a sloughy state, as well as the parts external to the air. Some flakes of castor-oil now escaped with a foetid air (he had taken castor-oil a few days since); next, the intestine was exposed, of a dark, grumous appearance, and evidently gangrenous; this was found to adhere by old adhesions to the stricture, which was still divided. It being evident that the intestine was perforated at some point or other, and the hole being discovered, the intestine was laid open by two incisions and left in the sac, being secured from retraction by the adhesions above-mentioned otherwise it would have been secured to the edges of the wound by a ligature. A piece of oiled lint was now placed in the wound and the patient left to his fate, or the doubtful chance of recovering with an artificial anus. Before being removed from the table, the patient, upon making a slight exertion, a large quantity of feculent matter burst out; he was directed to cough, and another gust of this effete matter came away. A little simple dressing was then placed on the wound, and the patient removed to bed.

Mr. Hawkins remarked upon the different steps of the operation, describing them as above, and said that the omentum, covered by the peritoneum, was at first taken for intestine, but when he discovered that instead it was the sac itself, he exposed it. An opening already existing in the intestine led him to enlarge it still more, to give free exit to the feculent matter accumulated above the stricture. He could not offer the most remote chance of recovery by leaving the intestine in the state in which he found it, and merely applying a ligature to the aperture; such a practice might have been adopted with success had the intestine been in a sounder state than that in which he

found it; as it was, the only procedure left; was to open the intestine freely, and hope for recovery, with the disagreeable accompaniment of an artificial anus.

4 P.M. (An hour and a half after operation.) Great anxiety of countenance; vomiting feculent matter; pulse 90. No tenderness of the abdomen beyond what he experienced before. About half a pint of matter has come away. Tongue not very dry, although he complains of great thirst. In the evening was prescribed—

Magnes. Sulph. ʒi.

Aquæ. Menth. M. ʒiiss. 3tiis horis.

29. Not much pain in the abdomen, but some in the wound this morning. Has been continually sick during the night, and has not had any sleep. Pulse 100, with some degree of sharpness, easily compressible. A large quantity of fluid feces have oozed through the wound. Ghastly appearance of countenance when he dozes. He was ordered some brandy and soda-water.

2 P.M. The pulse has become intermittent. Mr. Hawkins prescribed—

Hydrag. Chlorid. ʒvi.

P. Opii ʒj statim.

Vini Albi, ʒiv. ex aquâ.

Warm fomentations to the abdomen.

Strong beef-tea.

7 P.M. His tongue is brown and dry. The sickness has continued. Enjoyed a quiet sleep for about two hours. Seems much lower, notwithstanding he has taken the wine, brandy, and beef-tea. Has not complained of any pain in abdomen.

30. 11 A.M. Pulse 110; very weak, without intermission. Tongue furred—yellow tinge on it. Has dozed a good deal last night and this morning. Complains of some pain in the lower part of the abdomen, but not so much as before the operation. Countenance betrays a wild and anxious expression. The edges of the wound are of a dull red colour, and rounded off; the centre of the wound is foul and gangrenous. Fæces still exude abundantly; a few undigested currants passed with them.

8 P.M. Pulse very quick and weak. Skin cool, and bedewed with a cold, clammy perspiration. Has taken his wine and arrow-root, but does not retain it, in consequence of the distressing vomiting.

10 P.M. Mr. Hawkins ordered—

Acid Hydrocyan (Sch.) gutt. iij.

Mist. Camph. ʒiiss.

To continue with the wine and brandy.

Dec. 1. After having taken one dose of the above mixture the sickness abated, and to-day he complains very little of it. Pulse 80, small and weak; feels very low. Takes his beef-tea and wine with much greater relish. The edges of the wound are less inflamed. A large portion of the omentum has sloughed away, the remainder is still alive. Much exudation of fæces. He does not complain of any pain in the abdomen; is altogether better. To take wine, brandy, porter, and beef-tea *ad libitum*.

2. Pulse 90, rather sharp without intermission. Slept last night a good deal, and had a slight return of sickness. He has taken four pints of porter since yesterday, and since the operation a pint of brandy, and a pint-and-a-half of white wine. There is no pain in the wound or abdomen worthy of notice.

3. Complains of slight pain in right hypochondrium. No sickness. Dozed at times during the night. The extremities have been exceedingly cold during the last twenty-four hours, and required warm bottles to be applied. Pulse slower, but not remarkably weak.

4. Seems much worse to-day, and has not taken so much nourishment as on the other days.

When either hand is raised, the pulse cannot be felt at the wrist: it is about 84.

5. Tongue of dark colour, and rather drier. Could not sleep last night, although he states himself to be sleepless, he is continually dozing during the day-time, in which state he wakes as if he were dying. Within the last twenty-four hours he has taken eight ozs. of brandy, sixteen of wine, and the lean part of two mutton-chops, which has not the effect of making him drunk. Pulse 60, weak. The wound is much in the same state, with little or no disposition of the edges to unite.

6. The patient is much worse, and will probably die during the day.

7. Died.

Post-mortem examination, 39 hours.

The incision made during the operation in the direction of Poupart's ligament was filled with dark matter and sloughy cellular tissue; the two extremities of the gut, which were gangrenous, lay in the centre of the mass. The portion of the lower part of the ilium which had passed under Poupart's ligament was about three inches in length, and of a dark colour, emitting a very foetid odour. That portion of gut above the seat of stricture was also of a very dark congested colour, and covered with a thin coating of plastic lymph, close to the ring. A portion of great omentum and mesentery were found adhering to the hernial passage. The peritoneum was quite free from inflammation.

Knee-joint.—This joint on the right side was nearly incapable of flexion and extension. The patella had been fractured many years ago, the superior half had become firmly attached to the femur just above the condyles by means of a dense fibrous adhesion; the lower part was similarly united to the tibia.

MEDICAL MEMS. OF THE WEEK.

By PERISCOPICUS.

CHLOROSTS.—In the cases treated by Dr. Cowan, in one year's practice, 5 had never menstruated; in 8 the catamenia were suppressed; in 18 they were pale and scanty; in 1 profuse. In only 3 were they regular as to period, colour, and quantity; in 8 no notes were taken. Leucorrhœa was rather profuse in 7, and principally uterine. In the treatment, the bowels were kept regular, with various combinations of the officinal laxative pills, combined in most cases with the sulphate of iron, and occasionally a small quantity of calomel. The sesquioxide of iron was administered in drachm doses three times a-day, combined with one drachm of the aromatic spirit of ammonia, or from five to twenty grains of sesquicarbonate of soda. The muriated tincture and sulphate were the only other forms employed. He considers the effect of the sesquioxide almost certain if persevered in. Headach and nausea were best relieved by an emetic; the pain in the side, if obstinate, was generally removed by blistering the spine. The axiom of correcting the secretions before giving tonic remedies in chlorosis he disregards, believing it impracticable and absurd. The bloodless condition of the system bids defiance to healthy secretions; the latter become so when the volume and quality of the blood is restored. He does not regard this affection as depending upon constipation or hepatic disease, or that blue pill is a desirable remedy. Chlorosis cannot be regarded as depending on uterine or any other local derangement, since no proportion exists between the general and local conditions. It is probably due to an imperfect evolution of those constitutional developments, which the establishment of womanhood involves, in which the nervous centres are primarily interested. The

exciting causes are constitutional debility, and all those influences which are unfavourable to the general health; of these, sedentary occupation, insufficient nutriment, and over-exertion, are the principal. The good effects of treatment are often not apparent for several weeks, and this often leads to a suspension of the only means which promise ultimate success. He observed that when the mucous membranes were less pallid than the skin, and the latter of a dusky hue, the effect of remedies was less rapid and more uncertain. Visceral complications impede recovery, but many gastric and head symptoms are best removed by the free use of steel. Anemia from hæmorrhage in the later periods of life is often incurable, but perhaps never in the earlier, unless associated with serious organic disease.

SORE NIPPLES.—Mr. Hopgood, of Bampton, Devon, tried the tincture of catechu in a most severe case of sloughing nipples. In three days one nipple was completely healed, and in less than a week the patient could suckle on either breast with comfort and pleasure. Mr. Chevasse also says, the tincture of catechu is the very best application he ever tried; it has never failed to afford almost immediate relief, and after a few applications, to effect a cure. He applies the remedy by means of a camel's hair brush every time directly after the child has been suckling. The nipple should be dried before each application.

SCALD HEAD.—Mr. Stevens's, of Kennington, usual form of treatment is as follows:—To have removed as much of the viroid secretion as possible, externally, by washing with soap and water, twice a-day, &c. R. Chloride of mercury, gr. j. (according to age, &c.); comp. jalap powder, gr. iij. make a powder, to be taken every night, R. Nitr. oxyd. of mercury, ʒss; carbonate of lead, ʒj.; unguent. ceræ, ʒj., make an ointment, to be applied twice a day. He lays the chief stress upon the internal administration of calomel, blue pill, or mercury, according to the susceptibility of effect. The above form is quickly efficacious in the acute or inflammatory state of this disease.

LITHOTOMY.

By Professor PORTER.

THE requisite instruments are:—1. a narrow bladed scalpel, sharp, but sufficiently strong at the point not to break when it comes into contact with the staff. 2. A grooved staff, the groove being as wide as the size of the urethra will permit. 3. A narrow, straight, blunt pointed bistoury, sometimes spoken of as that of Sir A. Cooper, sometimes as that of Sir P. Crampton, and perhaps of others. 4. A blunt gorget to be used as a conductor. 5. A forceps of the requisite size. It may be desirable to have a number of forceps, of different sizes, and scoops and other instruments to facilitate the extraction in difficult cases, amongst which one, pointed like a lobster's tail and capable of having its curvature increased while in the bladder (an invention of Sir P. Crampton) is often particularly useful. The instruments should be arranged on a stool, placed at the operator's right hand, in the order in which they are to be used. The patient should be prepared by having his rectum well washed out by an enema of tepid water, or some very mild aperient administered a few hours previously, and he should be directed to retain his urine, if he can do so without distress. When every thing is prepared, the patient should be secured in the usual way, and if the operation is to be performed in the theatre of an hospital, I think that any other previous arrangement should be made in the ward, in order to avoid the ex-

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ORFILA'S LECTURES ON ARSENIC.

Containing an Account of the different Operations Performed upon the Body of LaFarge.

Collected and Translated by JOHN DAL PIAZ, Pharmacien, and Laureate of the School of Paris.

LECTURE II.

GENTLEMEN,—I have just received a letter, in which I am asked why, when sulphuretted hydrogen is added to a solution of arsenious acid, no precipitate is formed; and whether the sulphuret which produces a yellow coloration may be considered as soluble? I am also asked to explain the action of acids which are used to make the precipitate occur immediately.*

My reply to the person asking these questions is, that I did not think it right to enter into such details in my last Lecture, reserving them for the present one, when treating of the action of sulphuretted hydrogen upon the arsenious and arsenic acids.

We concluded our last Lecture in speaking of the action of water upon metallic arsenic; and we particularly noticed the very curious decomposition which takes place at 100 deg. Cent. (212 deg. Fah.)

We have now to study the action of cold water under ordinary circumstances. In this case, although no decomposition takes place, arsenious acid is very soon formed at the expense of the oxygen contained in water in a state of solution.† It is by this method we generally prepare fly-poison.

Action of Acids upon Metallic Arsenic.—When acted upon by sulphuric acid, metallic arsenic is transformed into arsenious acid; sulphurous acid being at the same time disengaged, and escaping in the form of gas.

The action of nitric acid is of the highest importance; we shall, therefore, examine it more attentively. If a small quantity of arsenic be placed into a glass tube having one of its extremities sealed, and upon this is poured nitric acid, a violent reaction takes place when heat is applied, binoxide of azote is disengaged, and a mixture of arsenious and arsenic acids remains; by dissol-

* M. Orfila is in the habit of answering, before beginning his Lecture, letters addressed to him by any student who may not have understood him perfectly.

† Atmospheric air being a mixture, and not a combination, of 21 parts oxygen with 79 azote, dissolves in water in proportion to the solubility of each of the two gases; consequently, the air dissolved in water contains a greater proportion of oxygen than there is in atmospheric air, for 100 volumes of water absorb 3.7 of oxygen and only 1.56 of azote at the mean temperature and pressure.

Mr. Dalton states that 100 cubical inches of spring water afford about two inches of air, which consists of 38 per cent. oxygen, and 62 azote.

ving this residue in distilled water, and subjecting the solution to the action of sulphuretted hydrogen, a yellow sulphuret of arsenic is formed.

Action of Chlorhydric Acid.—When this acid is heated with metallic arsenic, a chloride of arsenic is formed, with a disengagement of arsenuretted hydrogen. In this case the acid is decomposed, its hydrogen unites with one part of the metal to form arsenuretted hydrogen, whilst the chlorine unites with the other to form a chloride of arsenic.

Gentlemen, we shall now conclude all we have to say upon metallic arsenic, by speaking of its use, and of the method by which it is obtained.

Arsenic combines with other metals to form an alloy more fusible, more brittle, and whiter in appearance than the metal to which it has been allied.

Its only use consists in the manufacture of telescope mirrors, where it exists in combination with platina and copper. It is also used for making fly-poison, as we have said before.

To obtain metallic arsenic in large quantities, it is customary to heat the cobalt ore, which always contains arsenic in great abundance. This metal, in consequence of its great volatility, becomes sublimed, partly in the metallic state, and partly in the state of arsenious acid. Thus are these two substances obtained from one operation. We are now arrived to the several combinations of oxygen with this metal. The number of arsenical oxydes are, in reality, only two; but, as Berzelius admits of a third, we shall proceed to speak of it.

Protoxide, or Black Oxide of Arsenic.—It is of a black colour, and, according to Berzelius, is composed of one hundred parts of the metal with eight of oxygen. As it has very much the appearance of any other metallic powder, by what means can it be distinguished? In the first place, by the peculiar odour it emits when placed upon ignited charcoal; secondly, by boiling it in distilled water and filtering the decoction, a colourless solution will be obtained, which, by the addition of a few drops of an acid (chlorhydric, for example,) will give a yellow precipitate of sesquisulphuret of arsenic, when acted upon by sulphuretted hydrogen; and this yellow precipitate, when heated with charcoal and carbonate of potash, yields metallic arsenic.

The filtered decoction will also produce arsenical stains, when submitted to the action of Marsh's apparatus.

The two other compounds of oxygen and arsenic, are, the arsenious and arsenic acids. The oxygen in these two acids is in the ratio of three to five; or 100 metal with 0.32 oxygen for arsenious acid, represented by As_2O_3 ; and 100 metal with 0.53 oxygen for arsenic acid, represented by As_2O_5 .

Arsenious Acid.—It is found native in Hesse and Bohemia, but only in very small quantities; that of Bohemia is even sometimes found in the state of transparent crystals. Native arsenious acid being very scarce, it is the artificial we find in commerce, commonly known under the names of rat-poison,‡ arsenic, white arsenic, and white oxide of arsenic.

Physical Properties.—Arsenious acid generally occurs in white opaque masses; sometimes it is found vitreous, possessing a slight lemon colour, occasioned by the presence of a minute quantity of sulphuret of arsenic: it is without smell, and possesses only a slight taste rather difficult to describe. No disagreeable sensation is experienced upon first introducing it into the mouth; after a short time, however, a peculiar nauseous sweetness is experienced, followed by an acrid sensation, salivation, and constriction of the throat.

Gentlemen, it is highly important you should well remember these different sensations produced

‡ "Mort aux rats." The French also apply this name to powdered nux vomica.

by arsenious acid. The public generally imagine, on account of its poisonous property, that it must necessarily possess a most offensive and caustic taste. You may be asked whether it is possible for an individual to be made to take about half a drachm of such a deleterious substance without complaining of its offensive taste? The specific gravity of arsenious acid varies according to its physical state: when opaque, it is 3.6950; when transparent, 3.7886. Such are the numbers given by M. Guibourt.

Arsenic Acid.—It is never found native: like arsenious acid, it is a solid white substance, but differs from it in its being very deliquescent, and also because it is never transparent nor in a crystallised state. Its specific gravity is 3.391. Arsenic acid reddens immediately the tincture of litmus, whilst in many cases arsenious acid, even in large quantities, produces no sensible effect, which is owing to the alkaline state of the litmus. This is another fact to be particularly noticed; it shows how little confidence can be placed in the tincture of litmus as a test for arsenious acid. Nevertheless, you may have read in several old works, that some degree of importance was formerly attached to it.

Arsenic acid is not volatilised by heat; but when heated to redness, it is decomposed into oxygen and arsenious acid, which both escape. Arsenious acid, on the contrary, is easily volatilised by placing it upon a heated brick, or an iron plate. In this case there is no garlic odour evolved, this being peculiar only to the vapour of metallic arsenic, and not to that of arsenious acid.§ To detect the presence of arsenic by this character, it will be necessary to throw the arsenious acid upon ignited charcoal, when we shall have formed carbonic acid and vapour of arsenic, in consequence of the oxygen of the acid combining with the carbon; the metal thus isolated and vapourised gives out that peculiar odour which was unconsidered amongst the best characteristics of arsenic, but is now thought of very little importance, since other substances have been found to produce a similar result when placed under the same conditions.

According to this theory, arsenic acid, under the same circumstances, ought to be attended with the same results: this we find to be the case, with this difference only—to convert arsenic acid into metallic arsenic, by means of ignited charcoal, a greater length of time is required; the carbon has first to transform it into oxygen and arsenious acid, and then there is the further decomposition of arsenious acid into metallic arsenic with the formation of carbonic acid, as before stated.

Should you wish to be further convinced, you have only to burn arsenious acid upon ignited charcoal. No smell will be perceived when the head is placed at some distance, as in this case the metallic vapour becomes again oxidised before it comes in contact with the nasal organ.

There are several other substances which, when burnt, emit an odour analogous to that of arsenical vapour; we ought, therefore, to be very cautious not to conclude upon the presence of arsenic by this fact alone. Nevertheless, it is not without its value: in cases of analysis it may serve to excite our suspicions as to the presence of this poison. Although I have just stated some other bodies possess the above-mentioned characteristic, we must not, with M. Raspail, admit phosphate of

§ The odour of garlic emitted in this instance appertains neither to the vapour of arsenious acid, nor to that of metallic arsenic; it really is but an effect of the action of oxygen upon the metal, consequently, it ceases as soon as the oxidation of the metallic vapour is complete.

In the same manner may be explained the production of the various odours which characterise essential oils, &c. &c.—Dumas' Lecture of Dec. 6.

ammonia in the list. The assertion made by this gentleman respecting the odour emitted by this compound, is certainly a gross error; nothing can be more easy to foretell than the action of caloric in a case like this; the salt is decomposed with a disengagement of ammonia, and the phosphoric acid remaining immediately extinguishes the ignited charcoal with which it is in contact. Probably, M. Raspail thought the phosphoric acid would be decomposed, and that the volatilised phosphorus would produce a smell resembling that of garlic; but experience proves the contrary.

Another method has been proposed for detecting arsenic: it consists in dropping the suspected matter upon red-hot charcoal, and placing a strip of copper in the vapour produced. Some authors have said, when arsenic is present the copper is blackened; others, on the contrary, say it becomes white: so here we are in suspense between black and white. For my part, I say both parties are right; the different results depending solely upon the distance between the charcoal and the copper. In the first case, when the copper is near the charcoal, we have a black deposit of metallic arsenic; when the distance is greater, we have a white deposit: in this latter case the metallic vapour combines with the oxygen of the atmosphere to form arsenious acid before it reaches the copper.

Action of Atmospheric Air upon Arsenious Acid.—This alone is sufficient to distinguish between arsenious and arsenic acid; for, as we have already stated, this latter substance is deliquescent. Arsenious acid undergoes no change when exposed to the air, excepting in the case of its being transparent, when it becomes opaque by exposure. This transformation has never been well accounted for: a German chemist has attributed it to the absorption of a certain quantity of water; but to this is objected the insensible increase of weight after the effect is produced. Wolher attributes it to a change in its molecular constitution. Be it as it may, it is nevertheless certain that arsenious acid free from atmospheric air preserves its transparency, and it was from a knowledge of this fact I was enabled to throw a little light upon a case then pending before a tribunal. One of the judges, presenting me a piece of arsenious acid, desired me to say whether I could state, from its appearance, that it had remained for four months in a pocket. I admit I was somewhat embarrassed to reply to the question, which seemed to create some astonishment in the assembly, for it is generally thought a person having a knowledge of chemistry should be able to answer any question: in other words, should know every thing. Nevertheless, after carefully examining its external appearance, I broke it, and found its interior to be almost entirely transparent. This was sufficient to admit of my saying, that although I could not assert it had remained four months in a pocket, I was convinced it had been carefully kept in some place free from light and atmospheric air.

Action of Charcoal and Carbonate of Potash upon the Arsenious and Arsenic Acids.—Gentlemen, this action is also one of the most important: it is by its means we are enabled to obtain metallic arsenic; and I cannot too often repeat, that in cases of poisoning by arsenious acid, or any other compound of arsenic, we can arrive to no positive conclusion, unless we have obtained the poison in the metallic state.

When either of these two acids is submitted to the action of charcoal and potash, metallic arsenic is deposited in the fine extremity of the tube, as I have already exhibited when acting upon the sulphuret. The potash is only added, in this case, to seize the acid; thus preventing its escape from the action of carbon on account of its being so easily sublimed. Of course I am now speaking of arsenious acid, because arsenic acid is fixed. It would nevertheless be safer, when acting upon arsenic acid, to use potash, for fear there should be heat enough to convert it into oxygen and arsenious acid. I have before mentioned that Monsieur Raspail has stated that antimony under the same conditions as arsenic produces similar results: here we have a proof of the contrary. This tube contains a mixture of antimonious acid, carbonate of potash, and charcoal: it is now strongly heated;

and, as you may see, there is not one atom of the metal volatilised; you would sooner melt the tube than produce such a result.

This volatilisation of arsenic should naturally lead me to speak of Marsh's apparatus; but as I intend giving you a complete history of the instrument, I shall defer it to another lesson; at present, I shall only speak of its effects.

We hear it asserted, day after day, by certain parties, that stains signify nothing: for my part, I must confess I am quite of a different opinion, and think every one must be convinced of the importance of stains when he considers that a single drop of a saturated solution, containing only one hundredth part of a grain of dry arsenious acid, is capable of producing, by Marsh's apparatus, stains sufficient in number to cover a common-sized china plate; and I affirm that three only of the largest ones are sufficient to prove the presence of metallic arsenic. But this subject will again engage our attention after a time. Let us now examine the action of water upon the acids of arsenic.

Arsenic acid is so very soluble that cold water even will dissolve its own weight of it: arsenious acid, on the contrary, is not nearly so soluble. According to Monsieur Guibourt 103 parts of pure water at 15 deg. Cent. (59 deg. Fahr.), dissolves one part only of the transparent acid; while, to dissolve a similar quantity of the opaque acid, only 80 parts of water are required: 9.33 parts of boiling water are necessary to dissolve one part of the transparent acid, and only 7.72 to dissolve the same quantity of the opaque acid. It is almost unnecessary to add, that the boiling saturated solution deposits a mass of arsenious acid by cooling. It is in this way we prepare what we term a saturated solution, of which one drop in Marsh's apparatus is sufficient to produce stains for half an hour.

Action of Lime Water.—The above-mentioned solutions of arsenious acid are colourless and transparent; by the addition of lime water a white precipitate is formed which may be again dissolved by a further addition of the solution of arsenious acid. Several authors have stated the precipitate thus obtained to be black. Arsenic acid under the same conditions forms also a white precipitate, and so do many other substances: consequently, no importance can be attached to this fact as a test for arsenic.

Action of Ammoniated Sulphate of Copper.—If to a solution of arsenious acid ammoniated sulphate of copper be added, a copious precipitate of arsenite of copper (Sheele's green) will be formed: sulphate of ammonia remaining in solution. Arsenic acid, when acted upon in the same manner, produces a light blue precipitate of arseniate of copper, sulphate of ammonia remaining in solution as before. In former times this reagent was considered of the highest importance in medico-legal questions: for my part, I have often looked upon it as offering very satisfactory results; but now that we have so many better means for detecting arsenic, this test is of little or no importance.

Action of Sulphuretted Hydrogen.—This is the time, Gentlemen, to reply to the letter I have received this morning.

As soon as a solution of arsenious acid is acted upon by sulphuretted hydrogen, it assumes instantly a bright yellow colour owing to the formation of a sesqui-sulphuret of arsenic; but this solution still remains transparent. Now, in that letter I am asked whether I consider that a sulphuret is really formed; and if so, may it be considered soluble? I answer this question at once.

The sesqui-sulphuret is formed as soon as the sulphuretted hydrogen is added; and although it does not fall as a precipitate, it is not soluble in water, but remains in solution in consequence of an excess of sulphuretted hydrogen. To prove what I now assert, I heat the solution: the excess of gas escapes, and you may plainly see the yellow precipitate gradually subsiding.

In the same letter I am asked to explain the action of the acids in causing the precipitate to appear immediately. This has not yet been well explained. M. Boutigny d'Evreux studied this subject with a great deal of perseverance; nevertheless, he was not able to offer any satisfactory explanation, so he attributed the effect to elec-

tricity, and submitted his ideas to M. Becquerel, who seemed to entertain a similar opinion.

Arsenic acid, under the same conditions, does not apparently form a persulphuret until the liquid is heated; then, only a precipitate is formed.

The results obtained by sulphuretted hydrogen were formerly considered as the most important in all medico-legal questions upon arsenic. Our confidence, in this respect, is certainly much diminished; still we do not, like some officious persons have stated, consider it quite beneath notice; on the contrary, we always make use of it, excepting in those cases when the arsenic is in such minute quantity as not to be detected by this reagent. For example, two drops of a saturated solution of arsenious acid in twenty ounces of water cannot be detected by sulphuretted hydrogen; in this case we must have recourse to Marsh's apparatus, which will produce in great abundance well-characterised stains.

Uses of Arsenious and Arsenic Acids.—Arsenious acid is much used in the arts, more particularly for dyeing and painting; it is also used by agriculturists for preparing corn previous to sowing; a great quantity is also employed by colour-makers in preparing Sheele's green.

Arsenic acid has not yet found any useful application, and is only to be found in the chemists' laboratory or in the shop of the pharmacien. Both these two acids are used in medical practice in the shape of salts; Fowler's solution, which is daily prescribed at the Hospital St. Louis, is a solution of arsenite of potash; it is administered in cases of intermittent fever and diseases of the skin. Arsenious acid also acts as a caustic when applied externally; it is a component part of the Poudre du Frere Côme,† known also under the name of Poudre de Rousselot: this powder should be used with great caution, for it is absorbed, and its effect is very difficult to moderate.

We have nearly concluded the history of arsenious and arsenic acids; it only remains for me to explain the method by which they are prepared. The preparation of arsenious acid has been already mentioned, when speaking of metallic arsenic. To prepare arsenic acid we dissolve one part arsenious acid in two parts chlorhydric acid; to this solution four parts nitric acid are added, and the whole is evaporated in a glass vessel until it acquires the consistence of syrup; it is then poured into a platina capsule, and evaporated to dryness. It must be kept in stoppered bottles for use.

Gentlemen, I must beg to detain you a few minutes longer: I wish you to witness the operation of applying a ligature to the œsophagus, and am desirous to perform this operation now, that you may witness how easily an animal can recover after having the œsophagus tied for twenty-four hours. There are many persons who continually assert that this operation is more likely to kill the animal than the poison administered, and consequently they propose to banish it entirely. These scientific gentlemen, who reason after this fashion, are not operators—they are merely writers. M. Majendie, whose experience in physiology cannot be doubted, has proved, in a Mémoire upon tartar emetic, this operation to be of the utmost necessity when the mode of action of this salt upon the digestive tube is to be studied. But enough has been said upon this subject—let us have recourse to experiment; I hope it will prove to you that all cause of fear in this respect is entirely without foundation.

In the first place, I make an incision on the side of this dog's neck (about three inches in length); I then separate the cellular tissue with my fingers, taking care, at the same time, to seize only the œsophagus, which I tie, as you may observe.

† Friar Côme's caustic was originally a mixture of one part arsenious acid, five parts vermilion, and two parts ashes of old slippers. Rousselot altered it by substituting eight parts of dragon's blood for the two parts of ashes of old slippers; he also increased the vermilion to eight parts.

The new codex has settled its composition as follows: arsenious acid, one part; dragon's blood, two parts; vermilion, two parts. It is applied in the form of a paste made by means of gum and water.

To-morrow morning, at ten o'clock precisely, I shall take off the ligature in the Practical School, after which the animal shall have something to eat, and will for the future be exhibited to you at the commencement of each lesson. I invite all those among you who can spare the time to attend in the Practical School to-morrow morning.

ON THE TREATMENT OF DIABETES.

(Being a Paper read before the Medical Section of the British Association, Monday, June 27, 1842.)

By CHARLES CLAY, M.D., Member of the Royal College of Physicians, London, and Lecturer on Medical Jurisprudence, &c., Manchester.

Continued from Page 230.

I do not advance the tinctura ferri sesquichloridi as a specific by any means in this disease; time only, with extensive trials, and care in selecting the genuine article, can determine its merits; but certainly I can advance that its action in these cases was of a specific nature, and attended with the most decided success. No disease with which I am acquainted is so little affected by the presence of another; so that we have little to hope from metastasis in diabetes. I have strictly avoided alluding to other plans of treatment; but in the case of Wild, bleeding, the *sine qua non* of some authors, was attended with disadvantage—the diabetic discharge actually increased, in my opinion, in consequence of the bleeding alone. It is necessary to observe I did not try the vapour-baths as recommended by Bardsley, Oribasius, &c., because in two of the cases it had already been tried unsuccessfully; and M. A. Bouchardat states very positively that he had never seen any evident benefit follow their use.

Small doses of the sesquichloride of iron I found to have no effect. After repeated trials I adopted 3ij. as the least proportion for a 3vi. mixture. In each of these cases a strict animal diet was enforced. This alone might be considered by some as sufficient of itself; and whilst I candidly acknowledge that it is absolutely necessary towards a cure, yet I must say, though combined as rigidly with the previous accompanying plans of treatment, it had failed to accomplish its object. I am decidedly of opinion with that acute observer Bouchardat, that common bread should be strictly avoided, and that the beautiful substitute for bread for which the Société d'Encouragement had granted a prize to M. E. Martin should be used in lieu thereof. Dr. Budd, in his excellent observations on this disease, speaks highly of the gluten bread. M. Bravais, in his successful cases, rejected common bread.

As I stated at the commencement of these observations, two objects were to be in view: first, to effect a change in the secretions of the mouth and stomach, to prevent their formation of saccharine matter, which I am of opinion can only be done by substituting a strict animal diet, but which has little, if any, effect on the relaxation already produced on the internal structure of the kidneys; the second object is, to restore the existing relaxation in the kidneys by the plans I propose, which do not appear to have the effect of changing the secretions of the mouth and stomach.

I hold the same opinion on this mysterious disease as the ancients, Celsus and Sydenham, that it is unquestionably a disease of debility—one to be treated by tonics and astringents. In confirmation of this there are more successful cases recorded on the tonic and astringent plan than any other.

I was led first to give the sesquichloride of iron a trial, from observing its marked effect on other diseases where great debility prevails, and those particularly connected with the urinary organs. Not a more valuable remedy exists for dysuria, ineontinence, hæmaturia; I might go on to other affections not connected with the urinary organs, showing its general efficacy, as hæmoptysis, hæmatemesis, leucorrhœa, and menorrhagia.

I will now briefly draw your attention to the practice of others in respect to diabetes, in which I discover an analogy to my own method, and which, I conceive, will strengthen my position. Of course I include all those who have adopted the tonic and astringent plan with the drinking of chalybeate waters, nearly all of which contain iron in solution, from the time of Celsus and Syden-

ham to the present, and which, as you must be aware, are not a few. Dr. Baillie strongly recommended the drinking of chalybeate waters. Dr. Beddoes speaks highly of the effect of chalybeate waters. Dr. Frazer records a successful case with sulphas ferri. Dr. Venables cured one with the phosphate of iron. Mr. Hosten's case, related by Rollo, is decidedly in favour of chalybeates. Mr. Ernest, of Sheffield, laid great stress upon large draughts of porter, in which every one is aware the ferri sulphas exists. Dr. Trotter advised the carbonas ferri præcip. Dr. Mead was strongly in favour of chalybeate waters. Dr. Peacock, of Darlington, after a very long experience, found success in exhibiting a combination of nux vomica, carbonate of iron, and opium. Dr. Peacock considered his success attributable to the nux vomica; but, as the iron was to the extent of 5i. or ʒiv. in the day, it ought to share some of the credit in the cure, as he does not say that he succeeded without the carbonate.

Dr. J. L. Bardsley thus expresses himself in a note to me on this subject: "Tinctura ferri sesquichloridi, in doses from 15 to 20 minims, in some simple liquid, has been useful in diminishing the amount of urinary secretion, and in subduing the morning febrile exacerbation."

Dr. Prout says he has seen the very best effects from a combination of the pulv. ipeac. comp. and full doses of the carbonate of iron, exhibited in the form of an electuary made with albumen ovi. Bravais succeeded with the tonic plan. Dr. Budd advises the same, including porter, which, as I have stated, contains sulphas ferri. From such a mass of evidence as this, I may fairly claim some merit for the preparations of iron as a remedial agent. In respect to the sesquichloride, I believe its application is confined, nearly to myself. As a preparation, I prefer it to any other in diabetes, and should be glad to see its powers as a curative more generally tested. I would also enforce the necessity of medical men, whenever they feel disposed to adopt any plan proposed by others, not to condemn the proposition on the ground of having tried a preparation from the common routine of articles in the drug trade. I have no hesitation in declaring that the wholesale system of adulteration practised by chemists and druggists, and not only on the public generally, but also on medical men, is to such an extent, that they cannot possibly know whether they are doing right or wrong, and results differing as widely as the antipodes arise from what they expected. This observation does not apply to any one or two articles, but to ninety-nine out of the hundred in the Materia Medica. Why I mention this more particularly, is because I have known medical men at issue with each other on the practical application of some article, which, had it been properly tested before applied, such discrepancy of opinion would never have existed.

The preparation I have been recommending is not an exception; lecturers on Materia Medica have declared, that it was impossible to get the preparation genuine, even in London, without making it themselves. How is it possible that practitioners can agree on practical results whilst this state of things exists? Unfortunately, those in practice are either too busy or too careless to ascertain this most vital circumstance, to the success of their applications. I therefore earnestly advise those who have a desire to advance medical science by adopting, or practically applying, new suggestions, not only to test the preparations used, but also to stipulate that others applying them should do the same before they record a verdict for or against any plan proposed. I believe many excellent practical discoveries have been prematurely consigned to oblivion by these means alone. I trust the adulteration in the articles of the Materia Medica will be seriously taken up by this Section, and some means suggested for the correction of an abuse so vitally fatal to the medical practitioner.

Before concluding these observations, I wish to propose a question which may serve as a stimulus to discussion, with a view of proving the enlargement of the secreting tubes in the kidneys during an attack of diabetes. I believe the long-debated question, whether sugar exists in the blood or not in a diabetic patient, is now settled; and the con-

clusion is, that it does exist in the blood, and it is proved to be so by Mr. Ancell,* who perhaps has paid more minute attention to this subject than any other person. I think it is now equally certain, by the experiments of the same gentleman and Dr. G. O. Rees, that no diabetic urine is entirely destitute of urea, nor is any natural urine entirely destitute of sugar. In health, then, the urine, contains a very large proportion of urea, and a very small proportion of sugar. On the contrary, diabetic urine has a very large proportion of sugar, and a very minute portion of urea. When I consider the comparative size of the ultimate particles of sugar and urea, as numerically arranged on the principles of the atomic theory, does it not prove the secretory apertures or tubes of the kidneys are regulated by certain dimensions in health, which are sufficient to allow the particles of urea, as well as the particles of other substances of a similar or less comparative size, to pass through, whilst under an attack of diabetes those tubes or apertures are so enlarged as to admit of the passage of atoms or particles of a much larger size, such as sugar? If this be so, the laxity of the renal structures is certain;—if this be so, it is unquestionably a disease of debility, and the tonic astringent plan of treatment is the more justifiable; also, it is well known that there are substances, which, when simply brought in contact with the body, produce immediate dilatation or relaxation of muscular structures. It is not too much to suppose that sugar, when once in the blood, has the same effect on the renal structures, facilitating the passage of the noxious material present, and which is undoubtedly an effort of nature to abstract it from the blood; and it is desirable that this effort should not be interfered with, unless such interference be accompanied with means to prevent the formation of additional supplies, such as correcting the salival and gastric secretions.

I offer these ideas as probable, not as positive, facts; which, if established, would do much towards the treatment to be pursued. Hoping the observations I have made may not be considered misplaced, I leave the subject to the meeting to deal with it as they think fit. However reluctant those may be who have written on other modes of treatment to acknowledge the merits of the tonic and astringent system, facts derived from the statistical record of cases treated are most decidedly in favour of that plan, and so numerous are they that it would require a mind of no small originality to propose a means equally successful, or endeavour to suppress the merits which time and experience have long awarded to the tonic and astringent mode of treating diabetes.

RECOLLECTIONS OF PARISIAN HOSPITALS.

Being Notices of Cases in the Practice of Dupuytren, Roux, Beyer, and Lisfranc.
By J. NOTTINGHAM, Esq., Surgeon, Liverpool.

Fistula, Artificial Anus, &c.—March 1, 1833.—A child, ten weeks old, was brought to M. Dupuytren, at the Hotel Dieu, with a protrusion at the umbilicus, which, at first sight, might have been supposed to be an ordinary case of umbilical hernia.

The protrusion consisted of two small tumours, of a blood red colour, and smooth surface, which appeared at the umbilical aperture. In the tumour of the left side, or left half of the protrusion, is a small orifice, into which Dupuytren passed a probe, to the extent of about an inch and a half; the direction of the canal in which the probe passes changing immediately beneath the summit of the tumour. Through this aperture some of the milk passes after having undergone the usual changes in the stomach; bilious matter also escapes at the opening.

At the time of birth, the cord and umbilicus were apparently in a natural state, and during the two or three days that the ligature remained on the cord before it dropped away, the child had no bad symptoms. After the falling of the ligature,

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he protrusion appeared, and the matter from the alimentary canal, above noticed, began to pass through the aperture on the left. M. Dupuytren called the attention of the class to this case as one of considerable interest. He says, let us consider the manner in which the umbilical aperture is closed in the normal state; we must remember, consequently, the two arteries, and the vein that enter into the composition of the cord, connected together by cellular tissue, in which we have also some lymphatic vessels. Now, we may easily conceive the possibility of a small portion of intestine protruding into the space between these vessels at the umbilicus, so as to pass for some little way along the cord, which in reality occurs in cases of congenital umbilical hernia. If, under such circumstances, at the time of birth, the umbilical cord is cut very near to the abdominal parietes, the consequence will be a partial, or complete division of the protruded portion of intestine, and afterwards a stercoral fistula, or complete artificial anus. The former disease seems to have been thus produced in this child.

March 12.—The child is now wearing an apparatus upon the belly which has been purposely made for it. This consists of a plate of metal of about two inches in diameter, covered with leather, and folded in linen; it is applied to the part so as to make gentle and constant pressure upon the tumour, and is prevented moving off by tapes carried round the body, and tied behind; and by another set carried upwards, over the shoulders, and downwards, between the thighs, to be afterwards joined to the transverse tapes on the loins.

This apparatus appears to be very well suited to the state of the parts: it has now been applied upwards of eight-and-forty hours, during which time nothing has passed from the umbilical opening of the intestinal canal to the exterior.

Remarks.—The short notice given of this interesting case, supplies a caution to the practitioner in midwifery, as well as a useful lesson to the practical surgeon. It is to be remembered, however, that we now allude to the excellent remarks of the celebrated Parisian Professor, without attaching any importance to the slight additions which may have been made to his observations.

In securing the umbilical cord after the birth of the child, there is not unfrequently amongst young practitioners and midwives an uncalled for hurry and haste, as if, indeed, something very terrible would happen if they did not make all the haste possible; such a mode of proceeding occasionally leads to what might be called rather a random section of the funis, which it is always desirable to avoid, not only for the sake of the cord itself, or of the intestinal canal, which this case shows now and then to be in danger, and also that it may be seriously injured or laid open without immediately destroying life, but also for the sake of other parts; for those who have paid a little attention to the history of midwifery, may recollect, that cases are on record, where the penis has been snipped off by a careless and uncouth blow of the scissors; the genital organ having been unfortunately mistaken for a portion of the navel-string: such a boy might, indeed, in after-life find good reason to regret that he was not born a girl.

It is probable that the case of the child here noticed would afterwards go on favourably; the exit of intestinal matter being prevented, an attempt at closure of the opening would undoubtedly take place, for I have observed that nature seems generally, in cases of artificial anus, to intend something of the kind, as the openings now and then left in the groin after the operation for strangulated hernia, where the gut was already mortified, often contract gradually, until nothing is left beyond a very small opening, with wrinkled margin, sufficient in size to admit the end of the little finger; and, in such cases, it appears that if it were not for the barrier inside which obstructs the passage of the fecal matter towards the rectum, we might expect such openings to close without artificial interference; but every one who has attended to the morbid anatomy of artificial anuses, will readily see how the *vires medicatrices naturæ* are in such cases thwarted in their admirable attempts, and will at the same time appreciate the simplicity and excellence of that operation devised for the cure of

artificial anuses by the far-famed surgeon of the Hotel-Dieu, whose memory we call up with gratitude, and whose discoveries we contemplate with delight.

After a few more cursory remarks on the case before us, we will proceed to relate an instance of artificial anus in a man under the care of Baron Dupuytren in the Hotel-Dieu, with some notice of the operation he performed for its cure; for the subject of the two cases is essentially the same, although the characteristics be different.

In the foetus and new-born child, the belly is fully distended by the organs which it contains, and the position and size of the liver seem to ensure the presence of folds of the intestinal canal, close upon, and immediately behind the umbilicus, so that nothing is more probable than that a small fold may be pressed into the commencement of the cord, especially if there be any accidental looseness of the cellular tissue about this part, which is merely another mode of expressing the caution previously hinted at with regard to the importance of dividing the funis with extreme care at the time of birth.

Case of, and Operation for, Artificial Anus, February 1833.—A. B., aged 32, a blacksmith, stout, and strong, a man of good constitution, has come from Switzerland to Paris to be operated on for artificial anus, by M. Dupuytren, at the Hotel-Dieu.

It is now eight years and two months since he first had hernia. This hernia, which was inguinal, and on the right side, became strangulated six years after its first appearance, or two years and two months ago. For this strangulated hernia the usual operation was performed, but at a time when the constricted portion of the gut was already in a gangrenous state. Two days after the operation, fecal matter began to pass through the external wound, and has continued to do so ever since. The general health does not seem to have suffered much from the artificial anus thus formed, for he has worked at his ordinary occupation more or less as before.

The appetite is good, the aliments which he takes sometimes pass off more quickly than at others, and he says, that when this is the case, his hunger is greatly increased. Animal food is retained longer than vegetable. If he take potatoes, kidney-beans, &c., they pass through the aperture in the groin, without having undergone any appreciable change, at least this is the statement of the patient. He has not observed that bread passes in this way, nor does meat pass off in the same manner; he sometimes finds a few "undigested" fibres of meat in the vessel which he wears at the groin for receiving the discharge, but this is only occasional.

February 25.—This morning M. Dupuytren passed his finger with ease into the external orifice; afterwards he showed his *enterotome*, during the *clinique*, and described its mode of application, having previously spoken of the nature and varieties of the septum, as it is termed, which in such cases separates the two open ends of the gut, divided by gangrene, and prevents the semifluid matter within from passing towards the anus in its accustomed or rather normal course, directing it outwards at the artificial anus instead of allowing it to go onwards toward the rectum.

The male branch of the instrument, he remarked, is introduced into one end of the intestine, the female branch into the other, the instrument is then locked, or its two portions are closely approximated by the screw which passes through their handles, or extremity, which remains exterior to the abdominal cavity, so that the septum alluded to is secured and compressed to the extent of two or three inches between the closed halves of the instrument. This compression produces inflammation, and extensive adhesion of the contiguous peritoneal surfaces, while the narrow line of structure under the immediate influence of the pressure, must yield to gangrene and sloughing, as a consequence of which the instrument falls out by its own weight. That projecting part of the septum which prevented the passage of the fecal matter from the upper into the lower portion of the intestine being thus destroyed, such matter may now take its natural course towards the anus, and then our next business is to close up the external opening.

March 5, 1833.—Within the last few days, M. Dupuytren has two or three times tried to find the two orifices of the intestine, but had hitherto been able to find only the superior one; this morning, however, he has found both. It is now fifteen days since any fecal matter passed by the anus, although before the commencement of the last fortnight, about one-half of the feces passed that way. What can be the cause of this change? During the fifteen days alluded to, a long cylinder of rolled *charpie* has been constantly kept in the artificial anus, with a view of enlarging the aperture, that the *enterotome* may be managed more easily at the time of the operation; and M. Dupuytren thinks that this plug of *charpie* has pushed aside the lower of the apertures in such a way as to prevent the intestinal matter getting into it.

Application of the Enterotome.—Having found both apertures of the divided gut, M. Dupuytren this morning (March 5), applied his instrument, one branch being passed into the portion of intestine next the stomach, the other into that next to the anus; the instrument was then locked, and the screw applied at its handle end, to close its two portions and compress the intervening structure, when a by-stander would have supposed, or have hoped, that two or three inches of the septum were effectually seized and held, for the whole length of the two blades was within the belly, save that portion immediately beyond the screw which corresponded to the thickness of the abdominal parietes. M. Dupuytren, having screwed the instrument tight, next tried whether it had good hold by drawing the handle gently towards him; it came out, showing that the septum had not been seized, and that this fresh attempt must be regarded as a failure. He then reapplied the instrument with more caution, locked it, and fixed the screw; this being done, he again made traction to assure himself as to whether or no the septum was properly seized, when he found that the instrument had firm hold of something, for he could not draw it out, neither could he turn it. The external extremity of the instrument was supported on a little *charpie*, packed under it, and the patient now carried to bed. He did not complain of any pain during the operation; when the two portions of the *enterotome* were closed upon the septum he appeared to suffer very little.

March 11.—Last night the *enterotome* came away by its own weight, but on examining its blades this morning, M. Dupuytren does not find any portion of intestine upon them, no membranous shreds being attached to the blades as is sometimes the case, and the Professor remarks that he has generally found some portion of membrane between the blades of the instrument, after it had come away, and that this could be demonstrated as consisting of two layers, being evidently a portion of the double septum, separating the superior from the inferior aperture of the intestine. During the time that the instrument was in the artificial anus, and fixed upon the septum, the flow of fecal matter by the opening in the groin went on as before, and nothing fecal passed by the rectum.

March 12.—Since yesterday, at noon, nothing has come through the artificial anus, and the patient has felt some slight inclination to go to stool by the natural anus. He says that the only inconvenience produced by the instrument, was a little uneasiness which he felt soon after its application, and now and then a little griping in the belly. Injections, *per anum*, were ordered this morning.

15. Every symptom favourable; he tells us this morning that before the operation, when he had "colic pains," the opening in the groin or rather its margins were drawn inwards towards the interior of the belly, but he remarks that this does not take place in the same manner as before, since he had the instrument applied. M. Dupuytren thinks that this entering of the margin of the opening towards the interior of the belly, is produced by the contraction of the longitudinal fibres of the intestine during the slight attacks of colic.

19. The patient has had a stool by the natural anus every day since the instrument came away; there is still a flow of liquid matter through the artificial aperture, but in much smaller quantity than before the operation: he eats, drinks, and

sleeps well, and has no pain except now and then a slight attack of griping.

Hitherto the facts connected with the history of this case are more or less interesting, and the statements above are perhaps calculated to arouse the idea of a favourable prognosis having been entertained up to the last date; but the case afterwards assumed a more tedious aspect, the external opening did not close, and a few days after, when I last saw the patient, he was becoming tired of the Hotel Dieu, and began to speak of returning to his country, despairing already of the cure he had so sanguinely hoped for.

Artificial Anus from Accidental Injury.—March 1833.—A poor man brought his child, a few months old, to M. Dupuytren at the Hotel Dieu: in the groin of one side, about an inch above the level of Poupart's ligament, was found a small aperture, with the skin puckered around it, and through this opening faecal matter was making its escape. The man attempted to explain how the child had been accidentally stabbed, but Dupuytren was evidently of opinion that the injury was the result of a wilful attempt to destroy the life of the child. He ordered the aperture to be covered by a compress, and this to be maintained by an appropriate bandage.

It is probable, as before remarked, that the first of the three cases here noticed would afterwards go on favourably; the issue of the second or artificial anus after hernia it is not so easy to divine; the third case, from "accidental injury," if watched, and well managed, would probably allow of closure of the external opening and cure. There is but little certainty, however, about the issue of any one of them, and we have endeavoured to give the details of the principal cases in full, regarding it as an instructive instance of the difficulties which will inevitably be met with in the treatment of many similar complaints; for independently of other additional obstacles, that of peculiarity of structure is generally sufficient to annoy the surgeon considerably, where apertures in mucous membrane, serous membrane, or in both at the same time have to be closed. Yet it must be remembered, that this is a very interesting tribe of complaints, of which cases present themselves to notice more frequently than some would suppose; for we now and then meet with them affecting different parts of the digestive apparatus, with characteristics much varied by locality. As far, however, as the digestive tube is concerned, it might be said, that the buccal, gastric, intestinal, and anal, are the chief forms of fistula to be studied. In the first we have the peculiarities of salivary fistula to contend with; and in some cases also of what we will venture to call buccal fistula, openings of considerable size are made through the cheek, by gangrene and sloughing, during the progress of scarlatina maligna, for the treatment of which some modification of the surgery of Taliacotini may now and then be required; this, however, would only be resorted to a considerable time after the complete recovery of the patient from the previous fever, especially as the disease generally occurs in children for whom nature unaided sometimes does a great deal. The treatment of fistula which is a consequence of injury to the parotid duct, becomes exceedingly tedious if it has been neglected in the early stage; and it has been well said by Mr. Liston, that as yet sufficient importance is not generally attached, nor due attention given, to the exciting causes of many of the swellings, abscesses, ulcers, and tumours, of the cavity of the mouth and its neighbourhood; hence the troublesome forms of disease which we sometimes meet with in those parts, but which at an earlier period would have been more readily understood by their simpler character, and more easily treated for the same reason.

Gastric fistula, or that communicating with the interior of the stomach, is of very rare occurrence, and has been more noticed by physiologists than by surgeons, as it allows occasionally of curious and valuable observations being made on the aspect of the injected mucous membrane, during the progress of digestion, as well as on other phenomena connected with this function.

The causes which tend now and then to establish an abnormal communication between some portion

of the interior of the intestinal canal and the exterior of the body are very various, as will be seen in the origin and progress of umbilical fistula, such as we have noticed above, or of the different kinds of artificial anus, established either spontaneously, or as an accidental or intended result of surgical interference. Of the latter kind are those openings made by the surgeon in the loins and elsewhere, when some diseased condition of the intestinal tube prevents the faecal matter passing through the colon or rectum, of which interesting cases have lately been recorded in the English and French periodicals.

It is curious to observe how the parts concerned in some of the diseases we now allude to accommodate themselves to new conditions during a state of disease, for in cases of artificial anus we not only have the interior of the intestinal canal opened, and its mucous lining acted upon by the air; but we find occasionally that the serous membrane, to a greater or less extent, becomes exposed to the influence of the same elements; and yet all this may take place without extensive inflammation of either structure. We are not surprised to find this the case so far as the mucous membrane is concerned; but that the serous tunic should be so quiet in such circumstances, is opposed to the generally received notions respecting its delicate organisation and sensibilities. I am just now recollecting one of those cases where a portion of the intestinal canal escapes from the abdominal cavity, as a consequence of gangrene terminating strangulated rupture, and where we have a hernia, in short, without a sac, and an artificial anus at the aperture, where it escapes from the belly. Even with such a state of the parts a troublesome existence may be prolonged. Some years ago I attended the case of a boy, where from gun-shot injury to the right side, a considerable portion of the colon, as well as of the small intestine, fell out of the abdominal cavity. The lower ribs were shattered, and the liver and gall-bladder injured, and bile for some days after the accident oozed from the external wound; yet, although the serous membrane of the belly had been so extensively exposed, and that for some time before the arrival of the surgeon, yet the case did exceedingly well with common attention and treatment, taking care, however, to be on the alert for the symptoms of peritoneal inflammation, which were expected to make their appearance, and which did require the application of leeches, &c. It is to be understood, however, that in the case just mentioned there was no artificial anus, for the intestines having been returned into the belly, their function was performed more or less as before; and although, from the characteristics of the rest of the injury, we could scarcely suppose that no pellet of shot had passed into the intestinal tube; yet there was no escape of contents afterwards to warrant the statement, that any aperture had been effected.

Although the commencement of the present paper would scarcely seem to warrant our reaching the subject of fistula in ano, there may nevertheless be found some circumstances of analogy, sinking as it were together the varieties of fistula previously mentioned; for, as far as their treatment is concerned, we have one common indication to attend to, viz., that of closing, not only their internal or external aperture, but also the whole length of the intervening canal, which can only be effected by destroying its lining membrane, obtaining granulation from the raw surface, and the consequent agglutination of the sides; for which purpose, in the generality of cases of fistula in ano, a complete laying open of the part with the knife is essentially necessary: this, however, is a mode of treatment depending upon the peculiarity of structure and function of the neighbouring parts, and which does not apply to the other varieties of fistula above mentioned. We often meet with demonstrations of the great value of free incisions in cases of fistula in ano, when, as a mode of treatment, these are compared, by examining effects, with any other remedial application. I lately operated on a case of fistula in ano of two years' standing, where the opening of the canal into the rectum was rather high up, and had not been previously detected; yet by opening up the main channel, as well as some short side branches which it had, and crumming the parts well with dry lint, a good granulating surface was obtained, and a complete cure effected.

I formerly admired the operations of the celebrated Boyer for fistula in ano; by some they were considered rough; but the veteran surgeon of Napoleon always took care thoroughly to expose the parts, and to remove every portion of structure not likely to serve as the basis for good granulation.

Early operations for fistula in ano are much to be desired: hence the importance of frequent examinations, and a correct diagnosis in the early stage; for it is well known how anxious patients generally become about disease in the neighbourhood of the rectum, or organs of generation, and that fistula in ano preys considerably in many cases upon the general health, is a fact known to every practical surgeon. It will be requisite to attend especially to this truth in cases of fistula, where the aspect of the patient, and the prevalence of cough and expectoration, direct our attention to the state of the respiratory system; for it would be useless to operate for fistula in ano upon a man who may already have not only extensive tubercular deposit, but even numerous cavities in the lungs; yet this is occasionally done.

Imperfect foetal development, and the accidents of difficult parturition, occasionally produce what, for the sake of arrangement, we may be allowed to call vesical, vesico-vaginal, and recto-vaginal fistulae. Of the two latter as the result of injuries inflicted either by the long pressure of the head of the child, or the abuse of midwifery instruments during labour: the former is by far the more common. I have, at present, a case of this kind under my care, where it is not easy to decide about what is best to be done. When the finger is passed into the vagina, and the fore part of the os uteri touched, on withdrawing the finger a little, and directing its point towards the bladder, it falls upon the margin of an opening which is just large enough to admit its extremity; through this the urine passes into the vagina, and hence to the exterior, the patient, of course, having no command over its flow. I do not think that any mechanical contrivance will suffice to plug the aperture in such a manner as would materially lessen the inconvenience. A sponge pessary, either loose in the vagina, or supported by a spring from without, might have some effect, and might even deserve a trial, should the patient not think proper to submit to a serious operation. I should not have much faith in any attempt to cure the disease by removing the edges of the opening with any cutting instrument, and then approximating the raw margins by suture, for from the size of the opening, which would of necessity be somewhat increased by such an operation, and the constant trickling of the urine over the outer border of the aperture, it is not very probable that union by adhesion would take place; hence the propriety of considering, whether or no the actual cautery might not be employed with advantage, by allowing long intervals between its different applications, and thus obtaining that gradual contraction of the aperture, which in some cases has succeeded in effecting a cure. The only thing telling rather against the probability of success, appears to me to be the somewhat large size of the opening. In cases of recto-vaginal fistula, the bold treatment of laying open the back of the vagina, and afterwards trusting to granulation, might in some cases suggest itself to us,—but here the greater consistence of the contents of the rectum, as well as their position, is more favourable both to the efforts of nature and art.

That communication between the cavity of the bladder and the exterior of the body, which is a consequence of imperfect development of the foetus, is now and then met with; but to mention it here perhaps requires some apology for the liberty we take with the common groupings of disease. I lately saw a curious instance of this in a male child, a few months old, in other respects remarkably healthy looking; the abdominal parietes were imperfect below, the fore-part of the bladder open, and the red mucous lining protruded, and bathed with the urine as it trickled from the orifices of the ureters. It is apparently a case where no interference of surgical art could be of any avail.

Concluding Remark.—In noticing the case upon which M. Dupuytren operated for artificial anus, it was not considered expedient to mention the details respecting the morbid anatomy of this

malady, which was first ably investigated by that distinguished Professor, and this notice is the more required, as we have so often alluded to that portion of the conjoined ends of divided intestine, to which the name of septum has been given, but with which every anatomist and surgeon is acquainted. It is probable that one or more of the cases here related may have appeared in some French periodical, or other publication; if so, a better detailed and more scientific account will most likely be found of some of the circumstances which we have attempted to describe.

EXTRACTS FROM FOREIGN JOURNALS.

(For the 'Medical Times'.)

ACADEMY OF SCIENCES.

M. Liébig was elected a corresponding member of the Academy, in the section of chemistry.

Artificial Anus in the Lumbar Region.—M. Amussat read a memoir on the possibility of establishing an artificial opening in the colon in imperforate children. After reviewing the various modes of operation proposed for this condition, he stated that from the result of seven cases, in which he has formed the orifice in the lumbar region, he has perfectly established the possibility of penetrating the intestine, without opening the peritoneum. A knowledge of the anatomical arrangement of this region will also place the matter beyond doubt; and M. Amussat believes that, from his dissections, he may safely assert that the anatomical formation favourable to the success of the operation is the rule, and the contrary arrangement the exception. In the infant, the anatomical disposition of the parts is still more in favour of the operation than in the adult; the relations of the organs one with another are also more constant in early life. In a pathological point of view, the lumbar region is shown to be the most favourable for the establishment of an artificial anus, for the intestine, when filled with stercoraceous matter, is greatly distended at this part. The indications in occlusion of the anus are reduced, then, to four points: 1°. To enlarge the anal opening when too narrow; 2°. When the orifice is closed only by a membrane, to perform its incision; 3°. If there is no trace of the anus in the perineum, to endeavour to discover and puncture the intestine in this region; 4°. Lastly, when these trials have failed, to make an incision in the lumbar region, and thus arrive at the colon. M. Amussat states, that the transverse and crucial incision of the skin and muscles presents, in his opinion, great advantages over the longitudinal incision of Callisen.

Nature and Treatment of Variola.—Dr. Seigneurgens read a memoir on small-pox, in which he argues that, inasmuch as vaccination is not always a preventive against variola, this disease is owing to some specific cause not yet indicated. Following analogy and reasoning also from the symptoms of the disease and the success of the treatment which he has adopted, he thinks that variola is owing to the presence of insects in the blood. The treatment which he proposes consists in the employment of the preparations of mercury, both internally and externally.

M. Serres observed that this was not a new idea. Many microscopical researches had been made to ascertain the presence of animalculi in variola, but unsuccessfully. The following fact, however, would in some measure appear to favour the hypothesis of these insects. On covering each pustule with a glass capsule and maintaining it in this position for some days, he had seen the process of eruption continue, languish or entirely cease, according as the glass was transparent or rendered more or less

opaque. This influence was evidently owing to the contact of the air. Reasoning on these facts, he was led to modify, in some degree, the treatment usually adopted in this disease; for instead of placing the patients as previously in as light and airy a room as possible, he has chosen those positions which though well aired were rendered dark, a circumstance which has imprinted a favourable character on the eruption. He stated that the disease was on no occasion so mild at *La Pitie* as during one year when the patients were obliged to be placed in a low, badly ventilated, very dark ward, almost a kind of cave. The confluent form of the disease was then exceedingly rare. M. Serres also asserts, after observing between 1700 and 1800 cases of variola, that instances of secondary small-pox are quite as frequent as those of small-pox after a first vaccination.

Entozoa in the Frog.—M. Gruby states that he has clearly discovered the presence of these creatures in the frog. Their existence in cold-blooded vertebrated animals is exceedingly common. He has also ascertained the presence of the ova of these little insects in the blood, circulating in this fluid. Having injected these ova into the blood-vessels of a living animal, he has been enabled to trace their gradual evolution in the tissues of the body.

ACADEMY OF MEDICINE.

Employment of the Preparations of Gold.

—M. Chrestien read a paper upon the preparations of gold, and their properties. The efficacy of this remedial agent in the treatment of syphilitic affections is now universally allowed. It is still further proved by the divergence of opinion existing between the Academy of Sciences, who declared in 1817, that the preparations of gold very useful in constitutional syphilis, were not at all suitable for the recent and acute affection, which became exasperated by its employment and complicated with new and serious accidents: and the physicians of New York hospital who, at the same period, asserted as the result of their experience that the preparations of gold were equal in efficacy to those of mercury, and even in some cases superior, in the treatment of the primary symptoms, whilst they believed that it could not be counted upon as a cure for the secondary affection. But how is this difference of results to be explained? M. Chrestien argues as follows: "While fully admitting the specific nature of syphilitic inflammation, we must not forget that it, like the rest, possesses four common elements, namely—1°. Nervous irritability; 2°. The flow of humours to the parts; 3°. The state of congestion; 4°. Inflammation. There is also a something not well understood, and which therefore is called *specific*. Now, they who attack only this last element, fall into an error equally great as those who apply themselves only to combating the state of congestion and inflammation. It is from having administered the preparations of gold too early, when the inflammation was in its acute stage, that many physicians have failed with this remedy in the treatment of the primary symptoms; they have transgressed a precept of general pathology, which is invariably followed in other diseases. Inflammation is not the only complication in syphilis which sometimes renders nugatory the best adapted treatment; it would be too tedious to enumerate all the complications which may present themselves. I cannot, however, pass in silence over the *bilious* or *gastric fever*, which at Montpellier is one of the most frequent complications of syphilis. I have often seen, in the hospitals, venereal diseases, when far advanced towards a cure, become from this cause suddenly arrested,

or even pursue a retrograde course; but generally speaking a few doses of purgatives have sufficed to remove this condition. The late Professor Fages and Dr. J. A. Chrestien have particularly insisted on the employment of emetics and purgatives in this complication." He then proceeds to explain the cause of failure with the preparations of gold in secondary syphilis. "It is not," he says, "because a substance possesses a specific action that it should not also have some general property. Thus, although opium possesses a sedative action, we know that it is also a stimulant, and favours congestion towards the head; in like manner with quinine, which though a specific in periodical affections, is also, we know, used daily as a tonic in other complaints with the best effects. So with the preparations of gold; besides their anti-syphilitic property, they have a very active excitant power." "they evidently act," says Professor Percy, "upon the whole economy, sometimes producing considerable disturbance, and sensibly exciting the secretions and evacuations." Now, it is from not appreciating this property that so many physicians have failed with the preparations of gold in the treatment of secondary syphilis. To excite, direct, modify, suspend, or arrest this state of excitation requires a great degree of knowledge and attention. It is necessary, then, for the successful application of the preparations of gold in syphilis, whether primitive or secondary, as well as for the success of any other pharmaceutical preparation, that they be administered with care and discernment. Dr. J. A. Chrestien, in 1811, pointed out the evil effects which would result from a badly directed administration of these preparations. "By pushing the dose too far," says he, "there will be danger of causing a general erethism, or even inflammation of such or such an organ, according to the predisposition of the subject."

ON THE OVA OF MAMMALIA.

By Dr. HERMANN MEYER.

AFTER repeated examinations, I am now fully convinced of the existence in mammalia of a real yolk membrane within the chorion of Wagner. I pursued my observations on ova taken from the pig. The existence of this yolk membrane was most clearly proved by the appearance of ova, taken from ovaries that had been allowed to remain some hours in spirit of wine.

It may be observed, on looking at an uninjured ovum, that the little yolk balls do not closely join the inner edge of the chorion, but lose themselves in places more or less distant from it. The spaces resulting from this arrangement are filled with a yellowish granular looking matter, which is nothing more than the yolk skin. Both observations and experiments have given sufficient proof of this. Once, in breaking the ovum, I saw that the yolk balls did not emerge from the cleft in the chorion separately, but in a whole mass, which was visibly kept united by a covering, and was connected to the edges of the opening. I can only compare the conditions with the relations subsisting between a hernial sac and its ring. Within the almost empty chorion was perceived a folded and pale granular-looking membrane. On most of the ova I distinctly saw between the edge of the substance enveloping the yolk balls and the inner edge of the chorion, a space which, as Wagner has observed, enlarges by the intrusion of water. In one instance this space was considerable, and in consequence of the small number of yolk balls, the enveloping substance at the edge was particularly clear and visible. Though the existence of this space is no proof of the

folks being enveloped in a peculiar membrane, till it proves that they are kept together by some other medium than the chorion. That this medium is really a separate skin is proved partly by the observation already mentioned, and partly by an experiment that can be easily performed. If there be added to an uninjured ovum placed under a microscope, a few drops of liquor potassæ, the chorion is very soon dissolved, and there remains the yolk quite unchanged.

By moving the object to and fro, or by light and often repeated pressure, the observer is convinced that the yolks are still enveloped in a covering: on employing still stronger pressure, the membrane alluded to becomes ruptured,—the yolks emerge, and the covering remains as a granular membrane which otherwise does not manifest any peculiar structure.—*Translated from Müller's Archives.*

HOSPITAL REPORTS.

ST. GEORGE'S.

Stone.

George Murray, æt. 10, admitted under the care of Mr. Keate with calculus in the bladder; having suffered with the usual symptoms for four years. He is of a delicate complexion. Urine thick and acid. Much irritability of the bladder. Pulse quick. Bowels costive.

Decoct. par. brav., ʒiiss.

Acid. Nit. Dilut., m. ij. ter. in die.

Dec. 22. Less irritability of the bladder.

23. The following operation was performed: an incision was made with a scalpel in the usual situation on to a grooved staff previously introduced into the bladder. A *bistouri cachée* was now fixed into the groove, and by depressing the handle of the staff, the incision into the bladder was completed. The stone was seized easily, but from its size there was considerable difficulty in extracting it; some hæmorrhage took place during the operation, but not so as to require any vessels to be secured.

After he had been placed in bed, hæmorrhage to a great extent came on, and it was found necessary to restrain it by keeping up constant pressure by means of the finger on the artery. The hæmorrhage returned at different periods during the afternoon, and was only stopped late at night by pressure made with blue lint wrapped round an elastic catheter and introduced into the wound; this did not command it effectually until he vomited from faintness, and was in a perfectly blanched state. During the night he complained of acute pain in the abdomen.

24. Countenance very pale and anxious; pulse 100, irregular; skin cool; tongue white, furred; the bleeding has quite stopped, and the urine passes through the wound. Mr. Keate ordered him some porter to be taken directly.

27. Is doing very well; countenance still sanguine; urine passes freely through the wound, which begins to discharge slightly.

Jan. 9. He sat up to-day and passed his water for the first time through the urethra.

28. More urine passes through the natural passage.

Feb. 2. Discharged cured.

Alfred Riches, admitted under the care of Mr. Tatum, with calculus in the bladder, Dec. 28, 1841. He is a native of Norwich, and has suffered with symptoms of stone for the last 14 months. Health never very good, although he appears pretty well at present. Urine thick and acid; no deposit.

Jan. 6. The usual operation for lithotomy

was performed with a scalpel. The calculus was easily caught and removed. It was oval, flattened in shape, about half an inch long and a quarter of an inch broad.

7. He slept well during the night. There has been no hæmorrhage from the wound, and the urine passes freely.

Ol. Ricini, ʒij.

9. Wound healthy and contracting; going on extremely well; no feverishness.

15. The urine passed through the urethra this morning for the first time since the operation; a very small quantity still exudes through the wound.

21. No urine passes through the wound which has nearly healed.

26. Discharged relieved.

Gonorrhœal Ophthalmia.

James Pannington, æt. 21, a pot-boy, admitted July 27th, 1841, under the care of Mr. Cutler.

This patient had always suffered more or less from weak eyes, i.e., from profuse lachrymation upon the application of any inordinate stimulus, as light or particles of dust; this was consecutive upon an attack of small-pox. Three months since he contracted a *gonorrhœa*, attended with the usual symptoms, purulent discharge from the urethra, chordee, painful micturition. Medicines were taken for this complaint, and the discharge gradually (not suddenly) lessened, until July 15, 1841. He states, that he has frequently washed his face with the same towel with which he had previously wiped his penis. On the 15th July he felt a burning sensation in his right eye, attended with great pain, swelling of the lids, and much intolerance of light. His master, a publican, told him to apply a poultice over it, which he did. On Friday he did nothing more than keep the poultice applied. On the 17th he was admitted, the right eye had little or no vision, the left though less transparent than usual, was still capable of distinguishing objects at a distance. The conjunctivæ in both were extremely vascular, and the cornea of the right eye was already ulcerated, and nearly opaque; the left cornea was sound. Shortly after his admission he was cupped upon the temples to the amount of ten ounces. The lead lotion was constantly applied, and the following medicines administered internally:—

Pulv. Ant. Co., gr. iv.

Hyd. Chlorid. gr. v. statim.

The following ointment:—

Argent. Nitratis, gr. x.

Liquor. Plumbi Diacet., gtt. xv.

Unguent. Cetacei, ʒj.

To be applied to the eye.

In the evening he was bled, and ordered

Liq. Ant. Tart., ʒj.

Mist. Camphor., ʒiiss.

every four hours.

On the 18th he continued the same remedies.

On the 19th. The left eye became much worse, and he was ordered

Hydrarg. Chlorid. gr. iij.

Opii, gr. j.

every four hours.

The ointment was exchanged for an alum wash, as it seemed to cause much augmentation of pain, and give distress to the patient.

20th. The left cornea had commenced ulcerating. A depression was seen in the centre, and surrounding this the cornea appeared ragged. The lids were glued together with concrete pus. The vision in the right eye had been entirely destroyed, and dimness almost amounting to blindness began to be experienced in the left. The conjunctivæ were extremely vascular, of a

deep scarlet colour, the temples throbbed, the skin hot; pulse 95, sharp and full. At a consultation with Messrs. Hawkins and Tatum at 2 P.M., it was advised that the patient should be bled to syncope in an erect posture. This was done, and afterwards the pure Liq. plumbi diacet was dropped into the eye twice a day. The calomel and opium, together with the tartar emetic mixture, to be continued.

8 P.M. Blood, which was abstracted to sixteen ounces, not buffed or cupped. The cornea appears hazy and sunken, in consequence of the effusion between the layers of the conjunctiva. The pulse still continuing sharp, frequent, and full, Mr. Cutler again ordered the patient to be bled to syncope, and to continue the medicines.

21. Five ounces of blood produced syncope. The cornea is much more transparent, and, consequently, vision is improved. Much less vascularity of the conjunctiva; the chemosis has subsided greatly around the cornea. He complains of some tenderness over the abdomen, which he attributes to the medicine. His gums have become slightly tender. To continue with the lead drops. The antimony, calomel, and opium, every eight hours.

Tr. Opii, m. xx. statim.

22nd. To omit the pills, and take a rhubarb draught, the bowels being somewhat confined. The pain in the bowels was so severe as to prevent sleep during the night. Has no pain in the left eye, or in the temples. Pulse 85, soft and equable. Tongue yellowish. The conjunctiva is still very vascular, the cornea still hazy, ecchymosis of conjunctiva has disappeared, purulent secretion much diminished, and the viscid secretion does not collect and glue the tarsi together.

23. The left eye much improved, the cornea transparent, and the conjunctiva much less vascular. The pain in the stomach has subsided.

24. Much improved in every respect: put on better diet.

27. The safety of the eye is now insured: the ulcer in the cornea (superficial in a greater part of its extent) has sloughed away, and a small central opening in it permitted some of the aqueous humour to escape, but not sufficient to remove the support which this gives to the iris, and cause a prolapsus of this body.

Sol. Argent. Nitratis. gr. iv. ad ʒi.

30. By instilling the above drops two or three times a-day into the eye, the opening in the cornea has been made to heal. There remains a small cicatrix on the cornea, which, however, does not much interfere with vision.

ROYAL COLLEGE OF SURGEONS, LONDON.

List of gentlemen admitted members on Wednesday, July 20, 1842:—

G. T. Jones, J. R. Oliver, C. B. Boast, T. W. Cowell, T. S. Butler, H. Speer, H. Allen, S. H. Cooke, R. Hodgson, H. Callaway.

Admitted Friday, July 22, 1842:—

J. Winship, H. Langston, F. Spicer, W. M'Nerer, W. Jackson, A. Hingston, C. W. H. Howell, H. H. Parrott, W. T. Boddy.

Admitted Monday, July 25, 1842:—

E. G. Woolnough, J. J. Tweed, W. R. M. Griffin, O. H. Fox, W. Ettringham, R. Hood, D. T. Lewis, W. Wood.

ERRATA.—In No. 148, page 271, first col., lines 25 and 26 from top, for 3. read gr.—In No. 147, it should have been Sir James Clark, not Sir Charles Clarke, who recommended Mr. Herbert Mayo to proceed to Graefenberg to try Priessnitz's system.

TO CORRESPONDENTS.

F. P. F.—*There are, we are told, various methods of Mesmerising—perhaps the best (for a beginner) is for the operator to place the patient on a chair before him, the inside of his thumbs pressing on the inside of the patient's, the remainder of the hands being over his, and looking steadily on his eyes; the operator must use all his energy to transmit his influence from his hands and eyes into the patient. We have received this statement from a practical Mesmeriser of much experience. Such experiments more generally tried by the profession would be an important test of the truth of Mesmerism.*

Vital Periodicity.—*We are again inundated with letters on this subject. Judging from the zeal and devotion of Dr. Dickson's numerous disciples, he seems the sort of person formed to found a new sect of the believers, which, however, are not likely, from the specimens we have had before us, to be distinguished by any superfluous amount of meekness and charity. Vi et Armis, the name of one of our correspondents, swears at us with all the fanaticism of an Omer, and threatens us in so Mussulman a style, that death by sword or pistol seems the least evil with which we are menaced. Another charges us with a vile attack on Dr. Dickson—a third with skulking from the question; our answer to each and all is, that we shall shortly review the Koran of the great Heresiarch, we mean "The Fallacies of the Faculty;" and shewing the reasons why we deliberately spoke of "revival," shall give our unprejudiced and impartial estimate both of Dr. Dickson's system and mode of propounding it.*

Mr. Donovan, referring to the statement of Mr. Prideaux (in our last), that "he (Mr. Donovan) is so fond of being in opposition as to impede the progress of the proceedings of nearly every public meeting he attends," asserts "that Mr. Prideaux has made a statement which is totally devoid of truth, and defies him to adduce any proof that in making this statement he is not either labouring under erroneous information, or actuated by feelings which characterise themselves, much to his discredit."

B. F. Y.—*Turner's Chemistry as edited by Liebig, and the author's brother.*

Mr. Rumball.—*We hear that the notorious Mr. Brindley has been earning his wretched livelihood by giving his stale anti-phrenology lecture to the people of Liverpool. He appears to have been well met and answered. Mr. Rumball gave, at sight, the characteristics of several school-boys, brought forward by the Lecturer; and the schoolmaster has publicly avowed that the statement was remarkably correct, as far as he was acquainted with the boys.*

Dr. Davey's paper is in type, as also Professor Owen's Lecture, but we are reluctantly compelled to postpone them till next week.

We hope to insert Mr. Atkinson's paper, but must crave time.

Dr. Ward—W. H. B.—Meritus—J. P.—The courteous Vindex—Simplex (munditiis)—Mr. Morris—Received.

Correspondents must excuse our silence, or short answers. Our Journal would be a mere letter-book, if we inserted one-fourth of the notes we received.

THE MEDICAL TIMES.

SATURDAY, JULY 30, 1842.

— "Exeat Aulā
Qui volet esse pius."

LUCAN.

THE Pencillings of our able correspondent Probe, and the ex-President's recent letter on his own labours, irresistibly invite from us a few reflections as well on the public character of Mr. Guthrie, as on the schemes of Medical Reform, in which he is in one way or another implicated.

While treating with the contempt of a gentleman the blackguard effusions of the 'Lancet'—for twenty years, the arch demoraliser of the manners, and arch-degrader of the character of the Profession, we cannot deny that among the more respectable of our brethren there exists, as in Probe, the strongest distrust of the public probity of Mr. Guthrie. Many there are (many more than Mr. Guthrie suspects) who believe that he sought and retains office solely for its emoluments, and that, though not indifferent to the reputation arising from official eminence, or rather prominence, his public opinions and conduct are altogether influenced by narrow and sordid views of a personal and pecuniary character. Now, though on some—the most important points of Medical politics, we are quite at issue with him—believing, as we before expressed it, that his wishes and the Profession's interests run in opposite directions—we yet feel it a duty to avow our conviction that (his position and political prejudices being considered) a more well-meaning and less sordidly disposed man never took a share in the deliberations of the College Council. His attempts to make the Council a representative assembly—to reform the Court of Examiners*—his noble exertions in ameliorating the condition of Poor-Law Medical Officers, the present state of the College Library, &c., the College Lectures and Transactions, the College Museum—the latter of which (thanks to the genius and stupendous labour of our second Cuvier,) extorts from enlightened foreigners (though not from Professor Grant!) the acknowledgment, that it is, if not the richest, the best-systematized and regulated of any repository of its kind in Europe: all these, we say, in greater or less degrees, bear testimony to the disinterested and practical liberality which Mr. Guthrie has brought to bear on many of the subsidiary but still important points of Medical Government. If his foregone and settled conclusions, the result of his peculiar experience, temperament—any cause, in truth, but reason—would not allow him to change a bad system, his sense of what was enlightened, what was right, and, still more, his strong feeling of what was decent, influenced him at least to amend it. Viewed in this aspect, Mr. Guthrie, with his frankness, his general fairness, his practical good sense, stands out in pleasing contrast to many of his former, and not a few of his present colleagues, whose notions of what is right, when acting officially, are ever squared by *what is*—especially if the thing that *is* is personally profitable, and who, if their narrow and timid views of government were carried out, and their envious and sordidly selfish horror of fraternal participation of a benefit consulted, would have transmitted the Institution in Lincoln's Inn to eternity, in the same miserable plight, and under the same narrow-

minded and bigoted regulations as they received it from the ignorant barber-surgeons of the last century.

But, if Mr. Guthrie's useful and, at times, important services, have been thus generally overlooked or underrated, truth compels us to own that he has only himself to thank for it. People must not place their candle under a bushel and then complain that its light has not been seen. Why did not Mr. Guthrie, thus meaning well for the public, throw open the deliberations of the Council? The money, the institutions, the fate of the Members depend on its decisions. Why should they not hear the grounds on which the decisions were come to? The Council, it is clear, could not have dared to refuse admission to the public, if one of its body, influential as Mr. Guthrie, had claimed it for them. The very denial of so plain a right, recognised by every one of the British public bodies, would imply a dread of the light which the most sordid and recreant of its members would have been afraid to avow. But if it were denied, on what better or juster grounds, or with what surer prospects of success, could Mr. Guthrie have appealed to the whole Profession? We fear that Mr. Guthrie has lost his tide. Had he heartily thrown himself on the Profession, he would now enjoy—or be on the eve of enjoying—the highest honour within any surgeon's reach, the first position in the Profession, by the Profession's free and unanimous choice. As it is, if we understand his comates, he has seen his last Presidentship under the old system, without securing any certain assurance that he will enjoy a Presidentship under the new.

When we observe Mr. Guthrie telling the House of Commons in 1834, "As President, I have the satisfaction of saying, that there is not a grievance before the College to redress;" and, after referring to some reforms introduced by him subsequently to the above announcement, saying, in July 1842, "Now, when retiring from the office of President, I can fairly say, there is not one abuse or grievance remaining;" and in the same month, and in the same letter, find him admitting that the Council should not be self-elective, its examiners should not be appointed for life, and adding—what we are assured is the frank truth—that "he will not relax in his exertions while anything remains to be done, which, in his opinion, is likely to be advantageous to the public and the Profession." we are tempted to rest the whole truth of Phrenology on the existence of an inordinately developed organ called Self-esteem in the upper posterior part of the writer's respectable head, and to exclaim with the most philosophic of Cromwell's Biographers, "how is it that a man so clear, so straight-forward, so clever in his actions, should be thus perplexed, contradictory, and almost meaningless in his writings!"

* See Letter, MEDICAL TIMES, No. 148.

— "Olim
Religio peperit scelerosa atque impia facta."
LUCRETIVS.

IN June, 1841, Mr. Baron Gurney wrote a letter to the Managing Committee of King's College expressing, on the propriety of their Hospital's situation, certain doubts which had been forced upon him by a perusal of Mr. Walker's very excellent work on Grave-Yards. The Medical Committee having consulted together on this rather menacing letter, attempted to calm the scruples of the worthy Judge by a reply, which, after admitting with some delightful *ad captandum* ingenuousness, that London grave-yards are too small for their dense districts (an odd expression), that they are *OFTEN prematurely disturbed*, give rise to *revolting scenes*, are a *GREAT public nuisance*, and give out *deleterious* gases, which, concentrated, often prove suddenly fatal, and, diffused, are injurious to public health, proceeds to deny emphatically that typhus, or what with them seems the same thing, typhoid fever *originates* from them:—

Typhus fever (they say), like small-pox, is a disease propagated by contagion, or in other words, is produced by a specific poison generated in the body of a person affected with the disease, and nowhere else, and *consequently* the *primary* sources of infection are the living and not the dead. If the concentration of the poison be secured by permitting its abundant emanations from the bodies of the infected, in a close and stagnant atmosphere of small rooms, its effects multiplied by exposing a great number of persons to its operation, and its accumulation in articles of dress and furniture provided for by neglect of the common practices of cleanliness, the most favourable conditions for the spread of the disease are obtained; and few persons who have observed the lamentable extent in which all these conditions are fulfilled, in many parts of the metropolis inhabited by the poor, will deem it necessary to have recourse to any other supposition than contagion, in order to explain the occasional prevalence of fever in them.

If we can overlook the fact, that the Medical Committee of the Hospital must have seen an alarming symptom of diminished subscriptions in the enlightened Judge's letter, we shall find it impossible to understand how, with any pretensions, not only to any acquaintance with medical science, but even to the plainest and most ordinary common sense, they could have committed to paper opinions such as these. The reasoning of a Thuggist priest soothing the conscientious fears of his young disciple after a first assassination, would be a hundred-fold more respectable in point of plausibility, and not a whit inferior in point of morality. The opinions are not only absurd, but, on their face, contradictory. If typhus fever "is produced by a specific poison generated in the body of a person affected with the disease, and *nowhere else*," how came typhus fever first into the world? The fact of its existence proves, we may suppose, that it once had a beginning; and without giving up the sacred authority of a Book which the authorities of King's College cannot certainly be allowed to repudiate, we have not

many thousand years to travel back to find a time when, most certainly, there was not the body of one person affected with a disease which we now find diffused over the whole globe, and of frequent occurrence in every part. How, then, did it originate, if propagated *only* by contagion?

Without giving up the Bible, and asserting the eternity of typhus fever, the pious Professors of King's College must either contend that there is no typhus fever in the world, or else assert, what seems to us a vastly greater absurdity, than to say it may, and often does originate from the decomposition of animal matter, that it originated from nothing—*quiddam ex nihilo fit!* The dilemma, we believe, is perfect, and we have a right to ask Dr. Todd and the Medical Committee-men of King's College—are you for the eternity of typhus fever, or its origin from *nothing*? You must be for one or the other, if, as you say poison generated in the body of a person already affected with the disease, and "nowhere else," is your *sine qua non* for its existence. In the one case, we must take the liberty of branding you as infidel Professors of an orthodox College—in the other, you are the authors of a palpable and self-contradicting absurdity.

The paragraph in which the Committee account for the propagation of typhus fever, without any reference to the state of the grave-yards, though an ingenious piece of sophistry, could scarcely have been very satisfactory to one as well acquainted with special pleading as the learned Judge to whom it was addressed. It asks too much. If depraved air in a room be a favourable condition to the spread of fever, is putrid air in a grave-yard, *therefore*, not a favourable condition? Because the clothes of those around the infected living shall hold the poisonous matter, must the shroud that wraps the infected dead be *therefore* innocent? Because ill-ventilated habitations expose many to the "operation" of typhus fever, —shall the abode of the half-exposed dead, reeking with exhalations, which "concentrated, kill," and "diffused, injure" be excluded from the number of favourable conditions, which explain the existence or prevalence of typhus? Till these and a few other questions we mean to put are satisfactorily answered, Mr. Baron Gurney and ourselves must be excused, if we do not believe that the situation of an hospital, surrounded by three or four burial-grounds, and overhanging the very worst human carcase-yard in London, is accompanied by no inconvenience, in no way injures the sick inmates, has nothing to do with the generation of typhus or typhoid fevers, is a security for a good and large volume of air, and forms the "very best title" to public support!*

We shall return to this subject next

* See Dr. Todd's Evidence in Report on the Health of Towns, p. 133.

week, to see how far the views of Dr. Todd, and other members of the Medical Committee, are supported by the opinions of at least equally eminent members of our profession who do not happen to be engaged in the service of the College. The subject has excited no little stir in the immediate locality; petitions are already in circulation, public meetings are in contemplation, and we may fairly warn the managers of King's College, that if they do not speedily abate the hideous nuisance which they have so insolently erected under the public nose, to the opprobrium of our profession, and the injury of public health, they may soon not only be showing a curtailed list of subscribers and medical students, but find themselves the objects of direct Parliamentary interference, as the Thugs of British society.

PENCILINGS OF LIVING MEDICAL MEN.

MR. GUTHRIE.—(Concluded.)

SINCE the publication of our critique upon Mr. Guthrie great events have come to pass, affecting the interests of the medical profession, in which he played a useful and distinguished part. He has added another leaf to the "bays that bloom upon his brow;" he has exerted himself for the many, not the few—for the profession, not for a faction. He has extorted, or at least he inferentially lays claim, to having induced the Poor-Law Commissioners to adopt a fixed and uniform rate of remuneration for medical attendance, by which an approach to justice, and a proper appreciation of their labours, will be the result. The Press has acknowledged this his first step in a right direction in the handsomest and most liberal manner. "*Benefacere reipublicæ*" is a commendation that can be applied very rarely to any of the Presidents since the incorporation of the College. We believe that his mind is so constituted that praise is sweeter than the breath of May, more fragrant than the incense of frankincense and myrrh; and having inhaled it in the honest performance of a public duty, let us hope that it will not be an oasis in the desert of official dereliction, an isolated instance to which we can refer.

He must admit that a great revolution has been brought about in the circumstances of the profession since he came forward, covered in the brazen panoply of Monopoly, and bare, like Ajax, the whole brunt of the battle; when, in his eagerness as champion of the Corporations, he ventured to make, before the Committee of the House of Commons, the following monstrous statements:—

"As President, I have the satisfaction of saying that there is not a grievance before the College to redress; that the members could not be more satisfied than they are." The whole answering was a compound of audacity and sophistry, special pleading, and reckless and absurd reasoning.

To derive one thing from another with which it has no relation, is a sophism, which logicians call *non causa, pro causâ*. In this system of dialectics he was alone. His examination for this is worth perusal; it affords a fine specimen of a clever and not a too sensitive mind exercising its utmost capabilities to put a good face upon a bad case, and to impose upon his hearers. Every man who despises craft, who disdains subtlety, especially when employed for the most unworthy motives, must finish the reading of that evidence with mingled feelings of astonishment and contempt.

These assertions served much to bring about the present state of energetic and universal remonstrance and refutation. Associations sprung up in every city, every county, every town; the spirit of union and organization spread broad. The profession acts now like men who feel that their wrongs are aggravated by insult; their complaints derided; their rights withheld; their grievances unredressed,

and their ignominy and debasement represented as degrading and servile contentment. This libel, this misrepresentation is now abandoned. The strength and numbers brought into the field to deny it are too formidable. The colleges now adopt other arts—they try to preserve by fraud what they cannot hold by force. The exigency of concession is acknowledged; they accordingly urge certain paltry, inefficient, and insulting changes, in which their power is as rampant and offensive as ever, and which the profession will to a man “deny, defy, spurn, and scorn.”

They speculate upon delusion and the instinctive desire of peace, and dislike of agitation that distinguish our members. They are bad tacticians. Their plan is a mockery, an outrage upon common sense. It does not afford the lukewarm the poor excuse of laying down their swords. There is not one proposition that will content or conciliate any one honest man of the twenty thousand men who have petitioned against the abuses of the Corporations. We do not include in this the noisy declaimers who merely intrigue and agitate for place. In ours, as well as in every other avocation, there are and ever will be such scoundrels.

The sketch of the proposed partial Reform has the trace of the old serpent of Monopoly too strong upon it to deceive. The stream bears the taint and the bitterness of the fountain. We are too familiar with it to escape recognition. It is but a very lame stroke of policy to give stability to institutions which have been long condemned.

Partial reform of long-standing evils is less preferable than even the absence of any reform at all. This attempt to palliate, when the well-being of the constitution demands removal, must be denounced. The British Medical Association has taken the initiative, and leads the van. Every man, like Poliflex, must wage war, even to the knife, against it.

The public and the profession require that a general and a comprehensive measure of reform be submitted to Parliament, not based on narrow and selfish views, which emanate from any particular individuals or corporations, and are the whispers and leprous distillments of interested and mercenary men, who have inflicted much wrong upon the commonwealth of Medicine—not the coinage and invention of the irresponsible and self-elected College of Surgeons, and a chosen few of the Fellows of the College of Physicians. Sir Jas. Clarke, who, through the entire struggle, has resisted the seductions and the sneers of the Fellows who feared and envied his worth—who has, like Milton's Seraph, been “faithful found,” has truly and seasonably declared that the general practitioners are the profession; that they alone have been unconsulted; and that their demand for uniformity of education, and equality of privilege, is disregarded. Mr. Guthrie recollects being asked by a Member of the Committee of the House of Commons, “what better reason can be given for persons practising surgery, and also applying themselves to a particular branch, such as the eye, that they should be admissible into the Council, than that general surgeons who practise midwifery should be admissible?” “If a certain proportion of general practitioners were admitted, would not the Council so constituted be better judges of what regarded the interests of fourteen or fifteen thousand members of the College, who are general practitioners, and of the education of those intended to be so, than a Council composed exclusively of those who practise surgery? His answer was, “There is no passage whatever in the charter making any distinction between those who practise surgery, coupled with midwifery or pharmacy, and those who practise surgery only.” Sir J. Clarke triumphantly proves the necessity of medical and surgical knowledge existing in all the members of the profession alike, and the utter folly of denominating a small and exclusive section of the same under the terms, College of Surgeons and Physicians, while the great body—the thousands—the heads that conceive, the hands that execute—the soul and substance of the profession, are without representatives' protection or incorporation. His essay speaks the wants—is the voice, the pulsation of the heart of the entire

The terms of our demand are a prelimi-

nary education. A liberal and a learned profession requires a liberal education. Majendie asks, “Why is the student of the Polytechnic more respected in society than that of the more useful and noble profession of Medicine?” It is because he is generally a better-informed man. In Ireland a classical and mathematical examination prior to entering upon the medical curriculum has produced a superior race of surgeons, whose general acquirements give them such vantage ground that they supersede physicians, and are more considered by the public.

Next, one faculty or union of the divided functions of the Colleges of Physicians and Surgeons—the representative system or principle of self-government as contained in the Corporations' Amendment Act. The enrolment and registration of every legal practitioner under the term Doctor, as recommended by the Editor of the MEDICAL TIMES. One uniform system of education for the three kingdoms. In this there is nothing extravagant. No plan that does not embrace these cardinal points will be accepted by the profession.

The high places should be open and accessible to all. It might hereafter be worth consideration to establish some stricter standard for men who aspire to transcendental excellence. A plan or progressive preparation for honours might be advisable, by which the old and young, to a certain extent, would continue in a state of highly moral and professional apprenticeship, which would have the good effect of restraining them from any act that would forfeit the countenance and esteem of their brethren, and make it their interest to cultivate their good graces. Promotion to an important post before him—from that moment you may rely on his unwearied attention to conduct himself irreproachably, as in Rome, they passed through Prætorship to arrive at the Consulate, and the Quæstorship to the Cursus Magistracy; so that the steps in the ladder of Exaltation should be graduated and progressive, always observing, as a fundamental principle, that as long as the life of a poor man and of a rich man is equal in the eye of the law, the requirements for practice should be the same. Mr. Guthrie knows full well that to affix certain conditions of eligibility which only apply to a few, strikes at all those who belong not to this league, and pronounces exclusion, and robs the great majority of their rights. “To your tents, O Israel,” is the cry; the alarm-bell is ringing, the loud peals of which no intrigue, no *clique*, no Secretary of State, will be able to overcome.

It is one of the characteristics of genius to be able to look into futurity, and with the eagle's ken to see the shadow of coming events, to other vision imperceptible. The great majority of the profession in active and simultaneous co-operation, bringing their local influence to bear upon their representatives, the moderation and justice of their claims ensure discomfiture to the oligarchists. “Come, then, and gather the rose of Love while yet 'tis time.” Your career, according to your *autobiography* in *Pettigrew's Portraits*, has been full of obstreperous activity. Be as earnest in a good as you have been in a bad cause. You have great personal ambition—prefer being the President of the entire republic of Medicine, legitimately chosen in proud pre-eminence erect, to the petty leadership of a little *clique*. The one would “crown your glory, and your power confirm;” the other exposes you to the envy of your colleagues, and to the hostility of the aggrieved members of the College. Reform, it is acknowledged by its opponents, must take place. This is another stride. We even dictate the terms; and as you must see that it is unavoidable, bring your influence, your spirit of negotiation, your bustling diplomacy, to bear, in the regeneration of the whole profession. Instead of keeping your brethren angry slaves, make them contented members. Make your rule “imperium quo obedientes quædant,” as Tacitus truly describes it.

Union is power. In proportion as we combined and felt our strength, the *clique* felt their littleness. The two classes are now in a state of antagonism. One is as earnest as the other in combination. The larger number, now that they will allow no leader to mislead or sell them, is sure to prevail. Despair is for the few—Hope for the many. Prin-

ciple once abroad on the waters can never be crushed. Violence and opposition can only add to its adherents, and make more firm their devotion. They see in the hostility of their opponents renewed reasons to confirm their views, and to maintain their rights. You cannot hesitate. Necessity is the logic you can assign; the morality of expediency is being taught every day by the first men in the empire.

If one or two of the Council demur, you are Tiberius there. They must submit to your oracular nod. Laurence must be silent. You change from wrong to right; you can manage and flatter them—

“Ut si quis asellum
In campo doceat parentum currere frœnis.”

Some of our readers may say—

“Laissez mon cher ce discours superflus.”

To expect such things from such a man is to expect “figs from brambles, or roses from thistles.” We have seen strange things come to pass, and believe that if he were certain of support and influence under a new dynasty, he would not have many qualms of conscience in overthrowing the present as soon as it ceased to pay, and he ceased to be President.

There are different methods of representing character. One is by detailing acts, facts, words, and circumstances, in which the individual is seen. They assist best on this occasion. There are few men connected with party or faction who do not admit contradictory delineation according to the bias which people regard them. Some assert that Guthrie was never by nature a scientific man—that he would have made a good martinet, serjeant-major, or adjutant; others, that he would have been an excellent bully, or butcher, or market gardener, or horse-jockey, as he has a natural taste for such avocations. We do not believe a word of this. It is only versatility of talent in him. His character, they say, is not amiable. He is obstinate as a mule. Yet he is generous, impatient of check or contradiction. He is a man of quick sagacious mind. From his own memoir we learn that he is of Scotch extraction. His father, who was an honest tradesman, bequeathed a good name, if not a good fortune; at least, since his outset Fortune has been buckled to his back.

He is a good French scholar. In 1836 he published a work on the Anatomy and Diseases of the Urinary Organs; 1838, Clinical Lectures on Compound Fractures of the Extremities. His works on the Eye and on Military Surgery are standard works;—and here let me correct an error in the last Sketch, and at the same time do justice to the illustrious dead,—the celebrated Saunders, who had served an apprenticeship in the west of England, and then came to London. He distinguished himself in Anatomy; so that in two years he was appointed the Demonstrator to St. Thomas's Hospital. Finding that he would not be admitted into the Hospital—that money was the only talisman, he was again obliged to go through the form of a seven years' apprenticeship, and pay a certain sum of money. It was he who restored the diseases of the eye to the profession, and conferred great good on suffering society. Guthrie only imitated his example. The President, in giving once the report of the Ophthalmic Institution, indulged in his usual redundancy and professional pleonasm; but in the full tide of his impetuous eloquence stopped short, and, addressing his son Charles, asked how many cases of obliquity of vision he had operated on. Charles answered 997. This was Demosthenic. He declares it had a great effect: it astonished the Directors.

His best work is on Military Surgery. He is now preparing a voluminous paper on Fractures of the Head for the Transactions of the College, which Willis is revising, or rather pruning. The “*sylvâ ingens verborum et rerum*,”—when we get old we get too fond of.

We prefer the matter to the manner of his writing. He was too long busied in the camp, and so much of his life dedicated to Mars, that he had no time to sacrifice largely to Apollo and the Muses.

He is, withal his drawbacks, a good friend, an able man, and an excellent surgeon.

PROBE.

P.S.—Since this Sketch was written Mr. G.'s

address to the profession, through "his dear Hovell" is appeared, in which all the peculiarities of character to which we alluded, are by his own hand portrayed. His self-laudation, his military parade, "his government of large bodies of men, at an age when many had scarce learned obedience," his affectation of a love of reform under which he dislike of the very name, like the glistening eye of the serpent, peeps out, despite his endeavours to conceal it; his sneers at his colleagues, and at all those plans of reform which have been propounded, reveal the man in his true character, and confirm the correctness of our delineation.

P.

MEDICO-EDUCATIONAL REFORM.

to the Medical Professors and Lecturers of England, Scotland, and Ireland.

GENTLEMEN,—Having long anxiously waited, in vain, for some one who would be more capable of doing the subject of this letter the justice which its importance demands; and having in my own person felt, in no inconsiderable degree, the inefficiency of many, and the direct injury of some of the practices which at present guide you in the discharge of your highly important duties, as Professors and Teachers of the different branches of medicine, I feel myself compelled, from a sense of duty to those who are most interested in the question—I mean the medical students—to refrain no longer from addressing you as a body, through the pages of the MEDICAL TIMES, on the matter of Medico-Educational Reform; and, I may state at the outset, in case my motives for communicating with you through this medium be misconstrued, that I am aware of no other weekly medical paper, whose circulation, influence, and respectability, can equally warrant me that this letter will attract the attention of the great majority of your numerous body. Conscious, however, of my inability to discharge, completely, the responsible task which I have voluntarily undertaken; I must beg of you, in commencing my observations, to remember, that howsoever much I may fail in exposing clearly and distinctly, and to your satisfaction, those points, which in this age of general reformation ought to be immediately remedied, my object will be attained if this letter be the means of directing your minds to the very unsatisfactory state of Medical Education at the present day. Moreover, I come not forward as the advocate for the total destruction of the present, or for the purpose of recommending any other particular system of tuition. My sole object and heartfelt wish is, to see that the education of those who will soon take our places in the medical sphere, be keeping pace with the brilliant discoveries in, and the rapid advancement of almost every branch of medicine. And, in beginning to point out to you the immediate necessity of instituting this change, I need not insult your understandings by pleading the incalculable benefits which would accrue to mankind by such a desirable alteration; for no doubt it must have been in the experience of many, if not of all of you, that no immaterial portion of the present methods and systems by which you conduct your laborious duties, is fraught with profitless tediousness, and little satisfactory either to teacher or taught, and from which the student never can derive that profit which the necessity of the case and the great interests at stake imperiously demand. The great majority of you, Gentlemen, have no doubt felt the effect of this evil frequently, and longed for the day when it should be done away with; and it is humbly conjectured, that, for the accomplishment of this, the only desideratum is, and has all along been, your co-

operation as a body, and your making a consentaneous movement, and establishing an entirely new system, upon efficient and thoroughly practical grounds. Far otherwise than the present would be the result of your professional labours, if by any means you could institute that intercourse which should always subsist between master and pupil, and which I am assured, by past experience, you desire as much as the students themselves. This, no doubt, might be attained by the adoption of a more conversational style of lecturing. I mean, that much more real and permanent benefit would be derived by paying equal attention to examinations as to lectures. In studying the most important branches of the profession, such as Anatomy, Surgery, Chemistry, &c., it is impossible for the student to be always in the same circumstances, and under the same advantages—he cannot at all times be in the practical or lecture-rooms, to refer to the subject in the elucidation of any important, yet difficult point; and hence, when at home subjecting himself to the laudable purpose of self-examination, he labours under difficulties which would be avoided were other, and I would venture to add, less tedious means put into operation, when he is performing that frequently formal duty, of listening to your lectures, whereby greater power to his mental faculties would be given, and by which also you would have the means of commanding his attention, and of estimating each individual's assiduity—powers which would act most potently in every sense in his favour. These means, in my opinion, rest alone in the much-neglected custom of *practical** and *personal examination* on every point relative to the individual branch of study to which his attention is at that time drawn. None can doubt, but that by this practice the memory is increased to an inconceivable extent, and laying aside even the immense advantage it must afford him during his course of study, it will go far to strengthen and invigorate those thinking powers, which, in a science such as Medicine, require always to be exerted to an almost unlimited extent. I could illustrate more clearly this recommendation, by referring to particular cases and subjects, but this would occupy too much of the valuable space to which I am confined; hoping, therefore, that I have succeeded so far in pointing out to you the necessity of reform on this part of the subject, I shall proceed to another, and equally important department of Medical Education.

I am perfectly aware, Gentlemen, that what I am about to recommend to your notice has been practised for some time past by a few lecturers; but it is from the circumstance of its general rarity, especially in many of our Colleges, that I am about to mention it. Every one feels the absurdity of being compelled to attend for two, and, in some cases, three consecutive sessions, the same course of lectures, more particularly, when at the commencement of each, he witnesses an additional accession of students, who are, for the first time, entering upon their studies. I do not deny, but that to both parties these lectures may, in some degree, be useful; but matters are not as they ought to be; for viewing the case abstractedly, there must either be a loss of time to the one party, or injustice to the other: thus, 1st, if these lectures be suited to the first session, they cannot be considered as applicable to the advancement, which you must suppose is made in the second year; otherwise you admit a conflicting

* This practice has, we understand, been introduced by Dr. Hunter, in his teachings at the Westminster Hospital School. We should be glad to hear of its more general adoption.

conclusion, viz., the uselessness of the first course, so far as the second-year student is concerned; 2nd, if they be suited to the progress of the second year, then it must be allowed, that they cannot apply to the first-year student, who is entering upon an entirely unknown subject; and therefore, to do no more than justice to both parties, the universal institution of classes suited to each individual's advancement ought immediately to be adopted. The beneficial results of this practice are so evident, that I am only surprised that it has not been sooner adopted.

Such, Gentlemen, are two of the more prominent features in the constitution of Medical Education, which undoubtedly call for redress; and I am certain that they only require to be mentioned, to ensure your powerful assistance in their alteration. If, however, one reason urges itself more readily forward than another for this change, it is the aspect of medical affairs at home and abroad. No man can close his eyes to the crisis which is near at hand, when the tenets of every science will be severely tested by a new and sifting standard; and, although Medicine has withstood the power of revulsions, under the influence of which institutions, apparently as firm and secure, have tottered and fallen, yet we cannot expect that she will now remain untouched. Gentlemen, in your safe keeping has been placed that noble and scientific structure, which has been handed down from age to age, becoming every day more and more perfect; and surely it will never be said that in this age of Reform you ever showed yourselves backward in providing for its security and safety—in your care are placed those who will, sooner or later, occupy similar responsible situations to yourselves, and according to the opportunities of bettering and improving their condition which occur, and of which you take advantage; so, just in the same proportion, will be your confidence in leaving that structure in their hands, when old age incapacitates you from fulfilling the duties, or when you journey to "that undiscovered country" to which we must all, ere long, hasten. Placed in the situations in which you are, it is your privilege, and not less your privilege than your duty, that you, the heads of our profession, should see that the foundation of that edifice is as secure, if not more firm, as when you received it from your honourable predecessors. And what better security can men possess, that they have performed and done all which in them lay for the welfare and success of that which has been confided to them, than the approval of their own consciences, and the praises of them for whom they have all along been labouring?—I am, Gentlemen, your very obedient servant,

THETA.

Edinburgh, July 19, 1842.

To the Editor of the 'Medical Times.'

SIR,—As you seem to be a rational, and not a rash Reformer, I am induced to submit to you a few observations upon the subject of Medical Education, with especial reference to the general practitioner. You, as well as every one of the least observation, must know that this class of medical men is the most extensive, and from the past sphere of their labours, I may say, the most important one to the community, one that could be the least spared. Now, it is somewhat remarkable, that from this body no plan for the education of their successors should have emanated, but that the courses of study should be left to professed lecturers to determine. It is the more remarkable, because, I believe, that the courses are not exactly those that meet the approval of the majority of the most enlightened of general practitioners, nor is it

clear that they approve of the manner in which testimonials are obtained from the licensing bodies. The courses of instruction are not adapted for men to whom sound practical knowledge is of paramount importance. The extreme minutiae which the lecturers go into, are very well if each subject were to be studied as a separate profession, for it would at least require twelve or eighteen months for a diligent pupil to make himself fairly master of one subject in all the details that are brought before him in the lectures; nor is it possible that he can diligently attend all the lectures, copy them out, study them over, depart, and attend hospital practice, taking cases in a proper manner, without great risk of his physical powers breaking down. Hence, as far as my experience goes, and it has been rather extensive for nearly forty years, I do not find that the medical students, *ceteris paribus*, of the present day, when they come into practice, are equal to those who finished their studies under the old regime. I will go further, I do not find them in general so good anatomists or surgeons, nor such good bed-side medical practitioners; and this, though it may sound strange to those who achieve the extended course of study, and all the new French and German technology, is nevertheless very natural, and according to the ordinary course of things: I am keeping in mind those students whose means are ample, and whose desire is information. Such students came to Town with the ardent desire to fit themselves for practice; they knew a good practical examination awaited them at the College of Surgeons, but they had no Hall to grind for; they had not to prepare for all the out-of-the-way questions that the ingenuity of the *savans* of Blackfriars could conjure up, their inquiry was how to discriminate disease and how to treat it; they were not much plagued with what they would never have the opportunity of seeing, and which the lecturer himself never saw, and which, perhaps, no one ever truly saw. Now it is expected not that a candidate should know, for that would be absurd, but that he should repeat any portion that is proposed to him of the lectures of six or more professors, when it may cost each professor many years to acquire the information requisite for his course, that is, to pit a youth of two years and a half study against six men, who have each given perhaps ten years close application each to different subjects, and this is the minimum of professional requirement. Now, as to professional requirement, the examining bodies are by the public, through the legislature in this free country, deputed to see that no one receives the credentials of competence who is deficient in practical knowledge: now is practical knowledge sufficiently tested? I trow not; no one should be prevented from practising his profession but he who has been proved to be incompetent: if for the encouragement of superior attainments it should be deemed advisable to hold out honours, this may be done, but the minimum should be based on practical proficiency. It would not be proper to grant honours to any who had not given a year or two more to study than the usual period, or a reward is not offered for superior attainments, but to a better memory or a stronger physical constitution, or to a more cunning mode of cram than the ingenuous student will condescend to adopt. Whilst many things are required of the candidate which are redundant, it is obvious that much is omitted which is important. I hope the subject will be treated by some more able hand; I am certain that the present mode is not the best that can be devised for the young general practitioner.—I am, Sir, yours, &c.

AN OLD GENERAL PRACTITIONER.

London, July, 20, 1842.

DIABETES, AND SORE NIPPLES.

To the Editor of the 'Medical Times'

SIR,—The profession, I am confident, must feel greatly indebted to Dr. Clay for publishing his valuable paper on Diabetes; the public will be much benefited by the treatment recommended.

Should the preparation of iron in combination with opium and quinine, prescribed by Dr. Clay, have the desired effect of preventing a recurrence of the disease, a very great desideratum will be achieved, which obstacle prevented my publishing some remarks on the subject as far back as 1834; for just as my paper was ready for the press a relapse occurred in two cases, which taught me that I had something more to learn before I offered to instruct others. After this period, I tried a variety of agents, and what I found answer best was to order rest and prescribe of the Tincture of Opium m. xx. ter. in die until the quantity and quality of the urine is restored to a healthy standard; and although (quoting from my notes made at the above period) opium acts thus favourably, still there is much to be desired and much to be done, I fear, beyond the power of this valuable therapeutic agent; for not long after our favourite remedy may have been relinquished, and the patient indulged with the delusive hope that the enemy is vanquished, a sudden change of the atmosphere, or something causing sudden mental anxiety, or mental energy, will cause as suddenly a relapse on the part of the patient to follow; to guard against which, I find the exhibition of soda and quinine, given daily for weeks together, the most satisfactory treatment; still it does not invariably achieve a permanent cure. Although the bowels are generally much confined, yet aperients do not afford relief, nay the sufferings are frequently aggravated while under their influence. As to strictly dieting the patient, I think it useless, for whether you limit it to a vegetable or animal diet, the disease continues, and the chemist detects faulty urine. That the disorder is purely functional, I think will admit of little doubt, and like many other disorders of function, the true cause cannot be satisfactorily arrived at, any more than the organ first affected. In conclusion I repeat, should the treatment recommended by Dr. Clay prove permanent, the boon will be a blessing.

I should not further trouble you on the present occasion, were I not anxious that so valuable a remedy as the Tincture of Catechu (Tinct. Kino is as good) for the effectual cure of sore, or rather sloughy nipples, should not be injured by using it out of season. It has lately been introduced, unconditionally, as a specific for sore nipples; as such, disappointment must frequently be the consequence.

Should it be ordered in the inflammatory, or early stage, it invariably increases the sufferings of the patient rather than ameliorates them, for the nipple becomes more hot, dry, or hard, and fresh cracks quickly follow, not a little heightened by the state of the system. After the condition of excitement is gone by, and the nipple assumes a sloughy appearance, then is the time the Tinct. Catechu exerts its beneficial influence.

The following liniment should precede the use of it, viz:—

Sodæ Subborat, gr. x.

Aquæ Ferventis, 3j.

Ol. Amyg. Dulc. 3vij.

M. Bene et fit Liniment.

I am, Sir, your obedient servant,

J. H. HORNE, Surgeon.

Skin Dispensary, 2, Princes-street, Leicester-square.

THE LECTURES AT HANWELL.

(From a Correspondent.)

No longer can it be said that insanity is only taught in books, and its intricacies unravelled in the course of three or four lectures on the practice of medicine by the description of the lecturer, who delivers not the result of his experience in this branch of our science, but the pith of that he has read himself; the barrier obtaining an illustrative view of this theme diversified, so essential to the treatment of the insane, is partly and ere long will be completely removed to the student. The name of Conolly will not stand conspicuous only in the valuable and lucid reports which he has presented to the magistrates of Middlesex, but it will rank with those who are great in this age for their attainments in science; with those whose enlightened philanthropy has raised up a monument to themselves "more durable than brass." In him originated the design of throwing open to the profession that field for studying mental disease in which he and two others only were labourers; he discovered the mine, but the hands were too few to disseminate the stores which it contained. To render the mine profitable, he planned a scheme by which the ore could be carried away, be polished, and put into circulation. He recommended that a certain number of pupils from every hospital should be admitted to the bedside of a class of patients, who, without manacles or solitary confinement, had rendered the introduction of strangers not only beneficial, but curative process. Before, such an idea had never been suggested. Was it likely that during the course of the lectures, the insane victim chained to the wall, or confined in a cribbed floor, "confined and cabined cribbed" in filth and loathsomeness, should be suffered to be seen by the world, a monument of the want of skill in the physician, a studied brutality in the attendant; when the iron chain no longer secured the body to the wall, nor the handcuffs the hand to the bed—when tyranny gave place to kind treatment, the innovator might well throw open the madhouse doors, and say—"Come in and see my mode of treatment, and its results; go forth, and do likewise."

With the name of Conolly we must indite the names of the magistrates of Middlesex (and especially the name of Mr. Serjt. Adams), who have been the pioneers in working out the design alike advantageous to the profession and contributing to the welfare of mankind. Their liberal notions, their enlarged views soon caught up the idea of admitting pupils, and the doors of Hanwell would ere now have been as open as any public hospital, had not been necessary to try the experiment first, to watch its effects upon the inmates, and to ascertain how much time the resident medical officers could bestow from their already arduous duties to the still more arduous task of instructing.

The labour bestowed in the compilation of series of lectures must be immense, and this together with the somewhat tedious duty of directing attention to the various cases illustrative of them will, perhaps, preclude the possibility of any large number of students being admitted at one time. Mr. Pownall stated in a very splendid speech, which he delivered at the concluding lecture, that the advantage which the few had derived, would be extended to many more next session. Upon the faith of this declaration, we may promise a large boon to medical students, but we cannot conceive possible, consistently with the already numerous duties of the resident physician and house-surgeons, that a general admission will be given them. The duty has been voluntarily incurred and cheerfully executed; it is not fair that the

geriness with which we seek professional knowledge should render that duty irksome. We should wish to see other asylums sharing the duty with this, and thrown open in as general a manner; we should wish to see the benevolent and humane treatment adopted all, a treatment which can bear to be brought into light, a treatment which makes the downcast heart a hoping one. And why should not the proprietors of large private asylums throw open their doors to at least a few of their professional brethren? Such limitations might be placed on the attendance as would not be injurious, but, on the contrary, beneficial to the patients; whilst many would be instructed in those forms of insanity incidental only to the higher walks of life.

To return to the subject before us, the visits to Hanwell; it is not intended to give a description of the place, but simply to confine our notice to the manner in which these lectures were delivered. On our arrival, in consequence of the weak state in which Dr. Conolly was, we were conducted by the house-surgeons, Dr. Begley and Dr. Davey, (the former having the male, the latter the female department,) in separate parties through the wards, or rather galleries, into which opened the rooms of the patients. Here we had pointed out to us the particular and principal features of those cases which Dr. C. had selected to illustrate his subject. It was impossible to do more than glance at the different subjects of merriment and dullness, of imbecility and talkativeness, which walked and flitted around us, our attention being fully occupied by the illustrative cases and the practical remarks of the house-surgeons.

Having been conducted through the wards, which occupied the space of two hours, we returned to the large room provided for us, with every convenience for writing, to hear the lecture from Dr. Conolly, which, it is almost needless to say, was always redundant with sound and practical information, deduced from a source the most fertile and exclusive. The course included the subjects of mania, melancholia, monomania, imbecility, puerperal mania, mania combined with paralysis or epilepsy, &c., together with the treatment adopted in those cases which had been pointed out to us. A special reference was made to the moral treatment adopted in the asylum: on this point, the chief step was laid—for on this treatment depended the order and regularity which we saw around. The gentleness of demeanour in the domestics was the model on which the wild and furious spirits had been moulded, the consultative advice, the kind conciliating tone, used by the superior officers of the establishment in every communication with the patients, as, in most cases, the only treatment adopted. Restraint chairs, in which the poor lunatics used to be compelled to sit till they performed their evacuations, handcuffs, straight-jackets, instruments for forcing open the mouths of those who rejected food, were shown, not as things in vogue now, but formerly, as if they had been invented to drive the last spark of intelligence from the brain, and to put insane persons to all the tortures of the damned. Those who advocate the system of restraint, should walk through the wards of this well-regulated asylum, and compare the results and general demeanour of their own patients with those here; the contrast must be manifest. "What would you do, Dr. Smit. Adams," said an advocate of restraint, "in a case of this kind, which occurred in our house: a patient freed from restraint became violent, took up a poker and nearly killed the keeper; would you not confine him in a jacket?" "Certainly not," replied the surgeon; "I should discharge the keeper on

his recovery, for having been so neglectful of his duty as to leave a weapon of the sort about." This anecdote illustrates well the mode adopted where non-restraint is used; every thing which might be turned into a weapon of destruction is taken away, the vigilance of the attendants is depended upon to secure the patients from injuring themselves or others; rooms are provided, in which violent patients are shut up during their paroxysm, and the patients are never subjected to the unpleasantness and irritation of having their limbs confined. The delirious, the destructive maniac, the epileptic, are placed, during the night, in a room padded all over; so that it is impossible for the patients to injure themselves during their restless slumbers.

After the lectures a demonstration of the brains of those who died during the week was given by Mr. Solly, who remarked on the different kinds of union usually found in insanity; his remarks showed how much attention he had shown to this branch of study.

Such is a brief outline of the course of lectures delivered at Hanwell, in 1842—an æra memorable as one in which the first practical lesson on insanity was delivered. No place could have been better selected for this great undertaking, both as regards the multiple forms in which the disease is seen, and as regards the successful mode of treatment here adopted. No set of men could have set about the work with larger or more philanthropic views; no one could have executed the task with greater zeal, with greater talent, than the amiable and benevolent lecturer.

The students who attended from the different hospitals were not unmindful of the advantages they had derived, and presented a vote of thanks in the form of an address to the magistrates, Dr. Conolly, Dr. Begley, and Dr. Davey.

A. E.

REVIEW.

A Practical Treatise on Diseases of the Scalp, &c. By J. E. ERICHSEN, M.R.C.S.L. London: Churchill, 1842.

WE are under obligations to Mr. Erichsen for the attempt he has made to simplify the diagnosis of a class of diseases which are probably less generally known and scientifically treated, than any other class of morbid affections. Our author has confined his labours to a corner of the great field of cutaneous diseases; and we think he has not laboured in vain. He has brought both knowledge and ability to the task; and although our space will not allow us to enter minutely into the subject, we shall, however, present our readers with a brief outline of the practical information which the work contains. The cutaneous diseases peculiar to the scalp are of four principal kinds: the *vesicular*, the *pustular*, the *tubercular*, and the *squamous*, which are in succession described by our author succinctly, but with much lucidness and truth. Whoever wishes to prosecute with effect this department of medicine, should commence by a careful examination of the anatomical characters of each class above mentioned, when he will the more easily understand the modification or variety of diseases that appertain to the same class.

The *vesicular* diseases to which the scalp is liable, are eczema, both in its acute and chronic forms: under the modifications of eczema furfuracea and eczema amiantacea; and herpes, both herpes circinnatus and herpes zoster.

Impetigo is the only *pustular* disease peculiar to the scalp: but this disease may exist under three modifications; that of impetigo sparsa, impetigo granulata, and impetigo eczematosa.

The *tubercular* disease peculiar to the scalp is that of favus, which appears under two forms, that of favus dispersus, and that of favus con-fertus.

The only *squamous* disease peculiar to the scalp is pityriasis capitis.

Our author's views of the morbid anatomy of favus are different from those of dermatologists generally. Favus is generally viewed as a pustular disease, and it displays many of the external characters of a pustular affection; but as the secretion is not pus, but tubercular matter, our author is justified in his classification. For the description of the above diseases we must refer to the work itself. We can only afford space to glance at the *treatment* which our author pursues, and which may be viewed under a twofold aspect: 1st, the *general treatment*, or that applicable to all such diseases of the scalp; and, 2nd, the *special treatment*, that which applies to classes of such diseases or individual cases. With regard to the first, the following remarks are comprehensive and just:—

The *treatment* of the diseases of the scalp is too frequently conducted empirically, without due attention being paid to those indications that naturally present themselves. Irritating ointments, washes, and specific remedies, being employed in order, to use a popular expression, "to kill" the disease, without sufficient regard being shown to the removal of its proximate or predisposing causes, a proper attention to which can be the only basis for a speedy and certain cure.

The treatment of these affections may, with advantage, be considered under two heads, as it is *local* or *general*. The first having for its object, merely to remedy the local mischief by means of topical applications, and the second to influence it through the medium of the constitution.

The local treatment, which is perhaps the most important, and that on which we must chiefly rely, presents four indications:—

1st. To prepare the scalp for the application of topical remedies by the removal of the hair and scabs.

2d. To lessen any irritation, or inflammatory excitement, that may exist.

3d. To excite the part to a new action by the employment of proper local means.

4th. To continue the use of the remedies for some time after the disease has been, to all appearance, cured.

In acute eczema, a disease of daily occurrence among children, our author recommends mild topical and constitutional treatment; and in the chronic forms of the disease which are much less amenable to treatment, the following active plan will be required:—

Lotions, containing either the pure alkalies, or their carbonates and sulphurets, will be found to be especially useful in cases of dry chronic eczema, after the scabs have been removed by poulticing, and the surface of the scalp been thoroughly cleansed. The quantity of the liquor potassæ, carbonate of potassa, or sulphuret of potassium, used, should vary from one to three drachms to a pint of water. If any inflammation be excited during the employment of these preparations, they must be discontinued until this be subdued.

If, however, the disease prove to be more rebellious, and especially if it be the moist chronic form of eczema, we must either substitute for, or alternate with the employment of these means, an ointment made with some of the metallic preparations, such as the nitrate of silver, the iodide of sulphur, the bichloride, nitrate, or ammonio-chloride of mercury, or the sulphate of zinc, according to the degree of stimulation that the scalp will bear. The mode of employing these, that I have found to be most beneficial, is to apply the ointment, that we determine upon using, at night, ordering the patient to wash it off in the morning with a lotion composed of the sulphuret of potassium, then to reapply the ointment, and in the course of six or eight hours to wash it off again; thus alternately reapplying and washing off the ointment at stated intervals during the four-and-

twenty hours. This alternation of stimulus will prove to be exceedingly useful; but it will in general be found, that any one local application which at first appears to be of great service, will, after a time, lose its effect and necessitate the employment of some other.

When impetigo is mild, or occurs in very young subjects, cleanliness and poultices are only required; but when the disease is more severe, or occurring in children somewhat advanced in years, our author recommends the careful shortening of the hair with scissors, and the application of emollient poultices, and when the acute stage has passed away the use of sulphureous lotions.

The treatment of favus, the tubercular disease of the scalp, has given rise to much discussion. This is the only disease of the scalp known to be contagious; and at the same time it is the most untractable of all the cutaneous diseases of this region. Besides the constitutional treatment which requires to be particularly attended to, the local treatment presents three indications, viz., 1st, To clear the scalp of all scabs and crust, and to attend to cleanliness; 2ndly, To remove the hair from the diseased follicle; and, 3rdly, To set up a new action in the part affected; or the treatment is more fully summed up in the following words:—

The first thing to be done when a patient affected with favus places himself under our care, is to cut the hair to within a distance of half an inch or an inch of the scalp; poultices are next to be applied, and fomentations used, until all the crusts are thoroughly and completely removed, the head being, during the whole of the after-treatment, washed with brown soap and water at least once a day. Mild alkaline depilatory lotions or ointments are then to be employed, and a small-toothed comb used on alternate days, the hair being thus separated slowly and gently from the diseased follicles. If the disease be more than ordinarily obstinate, an ointment of the iodide of sulphur should be had recourse to, and if it occur in a scrofulous child, the iodide of iron, and mild tonics and alteratives, may be administered, with a view of improving the general health.

The treatment of the *squamous* disease peculiar to the scalp, pityriasis capitis, is very simple, consisting of slightly stimulating lotions and constitutional treatment.

The concluding chapter of the book is devoted to the consideration of alopecia or baldness, which we think is rather meagre in its details, although the principles are unexceptionable. The work is further illustrated by six lithographic plates, which represent most correctly and graphically the diseases in question. Taken altogether, the work is highly creditable to the author, and we shall be happy to meet him again in this field of research in which he has already appeared to so much advantage.

LITHOTOMY.

By Professor PORTER.

(Concluded from p. 272.)

Now making the belly of the staff as prominent as possible, and lateralising the knife to avoid the rectum, he strikes for the groove, commencing his plunge (if I may so term it) at the most inferior part of the wound, and directing his knife upwards and slightly backwards until he feels it engaged in the staff. This is a step of the operation on which I am fain to dwell, because you do not always see it attended to, and many excellent surgeons deem it unnecessary; it is, moreover, difficult to be effected—irksome, and almost painful to the operator's wrist, and cannot be performed at all by those who assume the sitting posture. What, then, is the reason I so strenuously insist on it? Simply because, if I can complete the

manceuvre, which I acknowledge to be a difficult one, I gain an object of no small importance in sparing the bulb of the urethra and its artery. The point is purely anatomical, and I have frequently verified it by dissection; but if you take Houston's plate of the section of the male pelvis, and construct a diagram upon it, making the wound to represent a triangle, the base of which is the external incision, and the apex in the membranous portion of the urethra, it is obvious that any line drawn to the apex from any part of that base, except near to its inferior extremity, must pass through the bulb. Now, although a wound of the artery of the bulb is not necessarily fatal, nor even always important, yet I have seen alarming and troublesome hæmorrhages in consequence, and therefore wish to avoid the possibility of an occurrence that at best is disagreeable. The point of the knife being in the groove of the staff, a series of manœuvres are to be performed, which, though done in succession, should appear to be simultaneous, and cannot be accomplished unless by a perfect correspondence between the operator's hands. First, the staff is to be drawn up firmly against the arch of the pubis; then the left-hand is to be depressed, in order to direct the other extremity of the staff into the bladder, the point of the knife being still maintained in the groove, and made to follow these movements accurately; and lastly, the knife properly lateralised is to be pushed on into the bladder, dividing partially the triangular fascia, the levator ani, prostate gland, and neck of the bladder. This part of the operation constitutes the *tour de maître*, and its quick performance gives an appearance of dexterity and address; but I advise the young practitioner to take these manœuvres in their order, and not attempt too much until his hand is perfectly formed. The knife having entered the bladder, which is known by the escape of a small stream of urine along its blade and handle, must be rapidly withdrawn, cutting its way out, and enlarging the wound as it proceeds. Of all the steps of the operation this is the one which I deem of most importance, for if the most perfect freedom is not rapidly given for the escape of urine, it infiltrates the cellular tissue all around, and the most deplorable consequences must ensue; but, though done quickly and with decision, it must be done carefully, for this is the period at which the rectum is in the greatest danger. The staff being still kept in the same position, the scalpel is laid aside, and the lithotome-bistoury introduced on the groove; the staff is then withdrawn, and the bistoury, being properly lateralised and held firmly, the fore-finger of the left-hand is passed along its back into the bladder, the prostate gland is thus divided, a large gush of urine takes place, and the cutting part of the operation being completed, the lithotome is withdrawn and laid aside. The finger still remaining in the wound, a blunt gorget is introduced, to serve as a director for the forceps: this is a step which is considered by many as being of little consequence; and yet I would never have it omitted, for the fibres of the levator ani are often irregularly or imperfectly divided, and may by their contractions so separate the internal from the external parts of the wound, as to render the introduction of the forceps difficult, or what would be infinitely worse, might prevent the escape of the urine, and thus cause infiltration: the stream of urine that courses along the channel of the gorget when the operation has been properly performed, is sufficient evidence of the importance of this latter suggestion. The forceps once introduced should, if possible, not be opened until the stone is felt and about to be laid hold on, and when the stone has been seized, it should be held firmly until the extraction is complete. I know that the first part of

this precept is often difficult, and sometimes impossible to be observed; that occasionally the stone cannot be felt; that the instrument must be opened and closed, and turned in different directions in search of it; but when charge nothing can excuse its being allowed to slip from the jaws of the forceps. Independent of the bungling and awkward appearance it imparts to the whole operation, it is positive injurious, partly from the pain it manifests on occasions, and partly from the excitement and agitation it may produce in the patient, which but too frequently ends in a fatal state of exhaustion.—*Dublin Press.*

MEDICAL MEMS. OF THE WEEK.

By PERISCOPICUS.

FIBROUS FORM OF RHEUMATISM.—Dr. Hope, in 1837, published, says Mr. Watson, an account of a particular mode of using calomel and opium in this disease, learnt from Dr. Chambers, and which is followed by many other physicians. It is said to be so successful, that even the details of it ought to be known. The plan is described as follows:—After a full venesection, or even two, in the robust, but without any bleeding in the feeble and delicate, eight or ten grains of calomel, with a grain and half of opium, according to the age of the patient and the severity of the case, are administered every night, and followed every morning by a strong black dose, sufficient to ensure four or five stools at least. With this treatment combined, thrice a day, a saline draught, containing from fifteen to twenty minims of tincture of vinum colchici, and five grains of Dover's powder. When the pain and swelling are greatly abated, if not almost gone (which Dr. Hope affirms to happen often within two days and almost always within four), the calomel is omitted or it is omitted sooner, if the gums become at all tender. The opium, however, is continued to the amount of a grain and a half at bed-time; and in severe cases a grain at noon is added; and the colchicum and the black dose are still given as at first. Dr. Hope considers it a case of exception if the patient is not well in a week. The following are stated as advantages of this plan:—1. That the patient is generally sound, well, and fit for work, in a week or ten days after the pains have ceased. 2. That the gums are rarely affected, especially if you previously ascertain that the patient has not a morbid susceptibility of mercury. 3. That it is rare to see inflammation of the heart if the treatment is early begun; not oftener, he thinks, than once in a dozen cases. 4. If the slightest symptom of endo or pericarditis does supervene, a few extra doses of calomel and opium, given every four or six hours, will generally affect the constitution in twenty or thirty hours, which with two or three cuppings or leechings on the region of the heart, almost always places the patient in a state of safety.

DEATH FROM PEAS.—John Lydbury, æt. 60, labourer, was brought to hospital June 27th, since 22nd, he had been labouring under obstruction of the bowels, attributed to his having eaten a large quantity of peas on the 21st; and since the 24th, there had been retention of urine. During the interval, he had severe pain in the abdomen, bilious vomiting, and constipation for which he took purgative medicines, without effect. At the time of admission was much debilitated, features pale, shrunken, skin cold, pulse feeble. As he was being carried in a chair up the ward, he suddenly fell, and expired almost immediately. On examining the body 26 hours after death the bladder was found excessively distended, its apex reaching the umbilicus, while its base nearly filled up the brim of the pelvis, and compressed the large

intestine as it passed over the brim into the cavity of the pelvis. The cause of the obstruction was found in the rectum, which contained upwards of a pint of common grey peas: these (swallowed in a dry state, and almost without mastication,) had undergone no other change in their passage through the intestine than becoming swollen by the absorption of moisture; some of them were mixed with the faecal matter in the colon, but the greater number had accumulated in the rectum, where they formed a solid mass, which occupied almost the entire pelvic cavity; this mass had pushed upwards the bladder and prostate, and compressed the urethra, so as to render impossible the evacuation of the bladder by any effort on the part of the patient.

USE OF THE FORCEPS.—Age 28 years; seventh pregnancy. This woman had borne six children, in the delivery of which she had always difficult labour, and the last child had been extracted by the perforator and crotchet by another practitioner. In this labour the head presented in the first position, and it was evident that the brim of the pelvis was somewhat in its antero-posterior diameter. A considerable opposition to delivery, also, arose in this case from a convergence of the spinous processes of the ossa ischia, which encroached upon the cavity of the pelvis, and resisted the passage of the head. At the end of 24 hours, finding from these two causes the progress of delivery impeded, the head having come down to rest upon the spinous processes below, while the remaining portion was engaged in the brim of the pelvis; perceiving that there was little prospect of delivery being accomplished by the natural efforts; and having the former labours as a guide as to what was to be expected, I (Dr. Beatty) determined not to wait too long without attempting to rescue the infant from its perilous situation, if it were consistent with the mother's safety. Accordingly the forceps were cautiously introduced, and as cautiously used as an extractor; and in half an hour from the commencement of the operation, I was gratified by the birth of a living boy, who with his mother continued to do well, until they left the hospital on the tenth day.—*Another Case.*—Age 36 years; ninth pregnancy. In this case the head presented in the fourth position of Naegle; and instead of changing to the first in the course of the labour, as it usually does in this presentation, it continued to descend with the anterior fontanelle towards the pubis. At the end of twenty-four hours (labour being very severe) the head was firmly fixed in the pelvis, and in six hours more (thirty) finding that no advance had taken place, and the vagina was becoming tender to the touch, while the pulse was gradually increasing in frequency, delivery was effected by the forceps. The child was dead. This patient recovered without any unpleasant symptom.

CAUSTIC.—The Dublin Journal gives three cases—two of cancer, and one of indolent ulcer—treated by Dr. Brunaker, in which the chloride of zinc was used as an escharotic, according to M. Conquain's plan, with decided benefit. One part by weight of the chloride and two parts of flour, were mixed together by adding a sufficient quantity of water to form them into a paste; this was spread over the entire surface of the diseased part, care being taken to prevent its coming into contact with the healthy structures in the neighbourhood; a piece of dry lint was then laid on, and lastly a piece of thin bladder, moistened, was placed over all, and secured with strips of adhesive plaster. In each of the cases the application was productive of much pain, lasting from twenty-four

to forty-eight hours; in two of the cases the slough separated on the fifth day; in the other on the sixth, leaving a healthy ulcer which cicatrized rapidly. The action of the chloride in both the cases of cancer was confined to the morbid structure, and destroyed it to its entire extent.

MOXA IN RHEUMATISM.—James Pender, æt. 56 years, got sciatica from standing in water the principal part of a day, washing sheep. He had been confined to bed for six weeks, and had used a variety of means—stupes, blisters, warm plasters, &c., without deriving the smallest benefit. Dr. Leney, of Bray, applied moxa in three places; first, at the origin of the nerve, each application three inches distant, and following the course of the nerve down the limb. This man had eighteen applications. From the first burning the disease descended, so that Dr. L. continued it down the limb to the ankle. Several of the burns continued open for some time. One particularly down the calf of the leg discharged pus for three weeks. This man has been ever since (now five years) at labour without having had any return of the disease.—To make moxa:—In a strong solution of nitrate of potass, soak a piece of lint, then dry it, cut off pieces the size of the thumb nail, fasten them at one extremity over the seat of pain by a thin adhesive plaster, set fire to the opposite extremity, then blow on it strongly with a blow-pipe. The pain during the operation is very severe, causing an immediate puckering of the cuticle. Those cases did best in which, under its influence, a general perspiration broke out.

GOUT AND RHEUMATISM.—The requisite points of distinction by Dr. Watson may be broadly and generally stated thus:—In gout the small joints are first and chiefly affected, especially the joint of the great toe: in rheumatism, the large. The redness of the gouty inflammation is more bright and vivid than that of the rheumatic; and the fluctuations between agony and ease are greater and more frequent. Gout usually affects one joint at a time; rheumatism, often many at once. The inflammation in gout is attended with more oedema than in rheumatism; and is followed, in the majority of instances, by desquamation and itching, phenomena which we do not notice at the close of rheumatic inflammation. Gout is not attended with those drenching acid sweats which are so characteristic of acute fibrous rheumatism. The gout is decidedly hereditary: rheumatism, if hereditary at all, is much less distinctly so. The gout occurs rarely or never, whereas rheumatism is not very uncommon before the age of puberty. In gout, though many functions suffer, there is no tendency to carditis: in rheumatism, with far less general disturbance, that tendency is very marked. Gout is the punishment (some have thought it the privilege) of the rich, of persons who live fully, luxuriously, and idly: rheumatism is most frequently the appanage of the poor, and of those who toil.

URINARY CALCULI.—The elaborate experiments of M. Leroy, lead (he says) to the following conclusions:—1. Certain acid and alkaline reagents exert on urinary concretions a destructive influence, which is very slow, even when the operation is carried on in inert vessels, and which affects principally the animal matter contained in these concretions. This corrosive action is sometimes impeded by the formation of new deposits, the production of which appears to result from the saturation of the free acids or acid salts of the urine. 2. Without absolutely denying the possibility of obtaining some suc-

cessful results, it may be laid down as a general rule that unless the size of the stone be very small, it will not be destroyed by reagents employed in baths or drinks used by the patient. 3. These same reagents introduced directly into the bladder exert a more powerful influence; but, in addition to the vital reaction of the organ, which often gives rise to inflammatory attacks, we meet in the application of these means with difficulties and obstacles which lengthen the treatment and render the success doubtful. 4. The combination of lithotritry with solvent media, would have the advantage of favouring the action of the latter, by increasing the points of contact; but it does not seem rational to adopt as an ordinary method this combination, which is applicable only in a few exceptional cases.

FORCEPS.—Dr. Beatty thinks that in those cases of accouchement in which the head is arrested in the pelvis, before it has come down to touch the perineum, a longer instrument than that in common use will be found of great advantage; and a blade constructed so that when both blades are passed along the head, the handles will be more readily locked together than with the usual form. The entire length including the handle is 12½ inches. Of the blade to the lock, 8 inches; of the fenestrum, 5¼ inches; the greatest breadth of blade 1½ inches; the widest part of the fenestrum, 1 inch. The distance between the blades when joined, three inches at the widest part; distance between the extreme points, 1½ inch. The sides of the blades enclosing the fenestra are nearly round, slightly flattened upon the inner and outer surfaces, but having no sharp edge, either on the outer border or the margin of the fenestra. The advantages that such an instrument possesses over others are, first, from its narrowness, the blade is more easily introduced. Secondly, when both blades are applied, the handles can be locked with greater facility, and from the length of the blades the lock will not be within the vagina. Thirdly, from the rounded form, there is no danger of hurting the mother in the introduction, or of cutting the scalp of the child's head with the inner edge of the fenestra in its extraction. This is a point upon which too much stress cannot be laid in ordering or choosing an instrument, for most of those that are found at cutlers' are finished with such sharp edges, that both mother and child are in danger of being injured by their use. With such an instrument as I have described, and with an accurate knowledge of the anatomy of the pelvis, and of the mechanism of parturition, it will be difficult (if reasonable caution be used) to inflict any violence upon either of the objects of our care. But a clear view of the relation that the brim, cavity, and outlet of the pelvis bear to each other, and the line described by the axis of the entire cavity, must be entertained by the operator to ensure a successful termination.

QUININE IN THE URINE AND BLOOD.—On examining the sediment formed in the urine of a patient to whom quinine had been administered, M. Landerer found, besides the phosphate and urate of lime, and carbonate of ammonia, a small quantity of quinine in a free state. In two other patients to whom quinine had been administered for the cure of intermittent fevers, M. Landerer discovered this substance in the blood. A perceptible difference was discernible between the serum and the coagulated portion, the bitter taste being most marked in the former, and the quinine could be obtained from it by evaporation; then digesting the residue in acidulated water, filtering, and precipitating it by ammonia.

ARSENIC.—Prof. Gianelli states that the blood, urine, and lungs of animals poisoned by arsenic, whether taken from the living subject, or from dead bodies, poison birds. The brain and spinal marrow do not produce any such effects. He has not been able to ascertain that the blood of animals poisoned with other substances is productive of equally fatal consequences. This fact may be made available in detecting cases of poisoning by arsenic.

ADVERTISEMENTS.

On the 1st of August will be published, at the Medical Dissector Office, 368, Strand, London, and to be had of all Booksellers, price 1d., **THE HYGEIST**, A semi-monthly Publication, intended to establish unity and certainty in Medicine upon rational Principles.

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PROSPECTUS OF THE HYDROPATHIC ESTABLISHMENT at Stanstead Bury House, near Hartford, opened for the cure of gout, rheumatism, incipient consumption, bilious and nervous affections, &c., under the direction of Mr. Weiss, from Friedwalden, by Gräfenburg, and formerly partner of Mr. Priessnitz. With a few Cases. Published by Muddan and Co. Leadon-bell-street, and Hatchard and Son, 187, Piccadilly, of whom may be had, price 2s. **THE COLD-WATER CURE OF DISEASE: its Philosophy and Facts.**—Designed to prove the extraordinary efficacy of this mode of treatment in some of the severest maladies. By C. Schlemmer, Sub-Director of the Establishment at Stanstead Bury.

SLEEP AT WILL.

In a few days will be published, price 10s. 6d.,

THE ANATOMY OF SLEEP; or, the Art of procuring Sound and Refreshing Slumber at Will. By Dr. BINNS, Fellow of the Society of Antiquaries of Scotland, &c.

The subjects treated of in this Work are, Life—The Brain—The Physiology of Sleep—Hibernation—The Sleep of Plants—Organization—Asphyxia—Trance—Cataplexy—Hallucination—Ecstasy (with two remarkable cases illustrative of this condition of the body, by the Earl of Shrewsbury)—Dreams—Somnambulism—Mesmerism—Sleeplessness—Means of Procuring Sleep at Will, &c.

The above is the first attempt by any medical writer to reduce the phenomenon of Sleep to a system, by directing the activity of the cerebral organs. The Anatomy of Sleep, therefore, will be found interesting, not only to the profession, but to the public at large, for whom it is more especially intended. Another circumstance, which in the eyes of many will render the work a literary curiosity, is the fact, that it is entirely set up by the new patent composing machine of Messrs. Young and Delcambre. A very small number, but five hundred copies are being struck off, consequently a very early application will be necessary to secure a copy. The work is illustrated by the new process of acrography, invented by L. C. Schomberg, Esq., and will contain upwards of three hundred pages. For the present, orders, directed to the Author, will be received only at the Office of the Medical Times, Wellington-street North, Strand.

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April 20, 1842.

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April 6, 1842.

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J. A. PARIS, M.D.

Dear Sir—I have now worn for some time a pair of boots with intermediate soles, which you term Impilia. They are admirably adapted for the ease and comfort of tender feet, and the elasticity of their tread is very pleasant. I can with confidence recommend them for general use, while for medical men they possess the very rare advantage of not creaking, and consequently are so desirable in a sick room.

H. S. ROOTS, M.D.

W. Baker, Esq.—April 25, 1842.

From Dr. Hodgkin, Lower Brook-street, London. Having not only examined, but put to the proof of experience, the patent soles invented by my friend Wm. Baker, M.R.C.S., and termed Impilia, I have no hesitation in saying that they are a very decided improvement on the common method of construction. They are not only much more agreeable to the sole of the foot, but promote a warm and uniform temperature as well as freedom from damp, whether entering from without or derived from the feet.

THOMAS HODGKIN, M.D.

30—4, 1842.

From John C. Tanaton, Esq., M.R.C.S., 48, Hatton-garden. I have worn with satisfaction the boots with the intermediate soles of Impilia. They are worn with more comfort, adapt themselves better to the form of the foot, and are impervious to wet.

May 2, 1842.

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LECTURES ON THE ANATOMY AND PHYSIOLOGY OF THE NERVOUS SYSTEM.

By Professor OWEN, F.R.S., &c.

THE nervous system in perfect insects approaches to its larval condition according as the segments of the body and their locomotive appendages are less concentrated and developed; thus, in the darkling beetle (*Meloid*) the abdominal nervous columns still manifest eight distinct ganglions, of which the last, perhaps including three ganglions of the larva, is now the largest, and radiates its branches to the generative organs. The first, or sub-oesophageal ganglion sends forward four median branches to the under parts of the mouth, and is connected with the brain by the two lateral cords forming the post-oesophageal collar. The usual nerves are given off from the brain, those to the eyes having acquired an increase of bulk corresponding with the great change in the size and complexity of the organs of vision. The stomato-gastric nerves arise close to the antennal branches, and form a median frontal ganglion, and are connected with a pair of lateral ganglions; from these the usual recurrent nerve is given off. In the thorax we distinguish the second ventral ganglion, which, as it distributes branches to the first pair of legs, was called the brachial ganglion. The third ventral ganglion supplying, amongst other parts, the elytra, may be termed the elytral ganglion. The fourth ventral ganglion is distinct in the present species, and supplying the nerves to the second or true wings, may be termed the alar ganglion. The distribution of the nerves arising from the ganglia situated in the thorax, and from those in the abdomen, were then described.

In insects having the organs of flight better developed, the elytral and alar ganglia present a greater proportional size; but different degrees of concentration in the centres of the nervous system are met with in these the higher forms of insects. In the blattæ, for example, there are as many as ten distinct ventral or inferior ganglions, in addition to the supra-oesophageal one. This part or brain is a transversely oblong bilobed mass, sending its upper and largest pair of nerves to the eyes. Anterior and below the antennal nerves arise from small mammillary processes of the brain, reminding us of olfactive lobes. The stomato-gastric nerves are seen a little in advance of those in the deflected part of the head; the oesophageal chords are short, uniting in a maxillary ganglion, or first of the ventral series, which is situated in the head; the inter-communicating chords which pass from this to the brachial ganglion are long, straight, parallel, and juxta-posed. The brachial ganglion sends off two large and two small pairs of nerves, the anterior ones distributed to the muscles of the arm, which are lodged within the anterior portion of the thoracic shield; the second nerve is continued to the terminal segment of the anterior extremities like the second nerve in the ganglions of the

centipede. The elytral ganglion, or the third of the ventral series, is larger than the preceding one. Viewed from the dorsal aspect, it is seen to distribute three small nerves to the muscles of the wing-cover; the posterior branch, anastomosing with the nerve sent from the succeeding ganglion to the wing, thus serves to combine these organs of flight in action in the orthopterous insects. In the Coleoptera whose elytra do not act in flight this anastomosis of the nerves does not take place. Four pairs of nerves come into view when the elytral ganglion is exposed from below, the anterior of these runs forward at an acute angle to the muscles of the two pair of legs. The next two anastomose with an alar branch. The third enters the second pair of legs, and is distributed to their terminal segments. The posterior branch passes to the alar plexus. The substance of the bilobed elytral ganglion seems as it were to be superadded to the under or ventral part of the nervous chord. The alar ganglion, formed by a confluence of the fourth and fifth of the larval ganglions, are situated at the same distance from the elytral as this is from the brachial ganglion. It is not quite so broad as the elytral, the wings which it supplies being shorter than their covers. The anterior nerve enters into communication with the elytral branches. The second nerve also, with the addition of branches to the muscles of the legs. The third nerve is distributed to the third pair of legs; the fourth to the muscles of the wing. The remaining six ganglions of the ventral series are contained in the abdomen; they are smaller than the preceding, the distance between them progressively increasing after the third. The last, formed by the confluence of the eleventh and twelfth ventral ganglions of the larva, is of a triangular form, and the largest of the series. It sends off a pair of conspicuous nerves to the cercæ or anal antennæ. The interganglionic columns are in contact laterally from the head to the anal ganglion. The respiratory nerves may be seen on their dorsal aspect above the second, third, and fourth ventral ganglion. If the nervous system of the Blatta be compared with the stages of development which it passes through in an insect, presenting a more concentrated type in the perfect state, as in the species of butterfly described by Heroldt, it will be found to correspond with the sixth stage figured by this author from the *Sap. Brassicæ*. In the Mantis the progress of coalescence has reduced the number of abdominal ganglia to four, and the whole nervous system corresponds with the ganglionic stage figured by Herault in the Lepidopterous insect just mentioned. This insect is chiefly remarkable for the great length of the ventral chords connecting the brachial with the elytral ganglia, and which renders them favourable for minute analysis of their structure. Anterior and posterior columns, or divisions analogous to those in the spinal marrow of higher animals cannot be distinguished. The so-called sensorial tract is confined to accumulations of nervous matter at the origin of the nerves to the locomotive organs. The results of the experiments when portions of the body of the mantis with one of these ganglionic enlargements, and the armed locomotive organs it supplies has been detached from the rest, illustrate the functions of these aggregated centres of nervous matter in relation to their power of receiving and transmitting impressions, so as to maintain the order of action of such detached organs upon the application of a stimulus for a considerable period after the mutilation. The jaws of the separated head of a mantis bite forcibly the stick which is held to them. The formidably armed first pair of legs in like manner wound whatever comes within their reach when the segment of the body supporting them is separated from the head and the rest of the trunk. And this latter part is maintained for a certain period in its natural position, perched upon a twig, which position it even recovers by actions of the

wings, when the balance is slightly and purposely disturbed.

The supra-oesophageal or cerebral mass in insects obtains its largest development in the dragon-fly, which from the size and perfection of its organs of vision, its great and enduring powers of flight and predatory habits, may be regarded as the eagle of insects. From the side of each of the superior lobes of the brain, the optic nerve is continued of equal breadth, so as to seem rather as a lobe of the brain. It expands, and then like the stalk of a mushroom forms the base of a very large reniform ganglion, the convexity of which is turned forwards and outwards, and the free concave, projecting margin developed at the under part. Thousands of branches to the divisions of the compound eye are given off from the convex surface of this ganglion. The brain presents a single median inferior lobe; the oesophageal chords sent downwards to the maxillary ganglion are short and thick. This ganglion is succeeded by three large equi-distant thoracic ganglia, of which the last two, corresponding with the elytra and ala of the preceding insect, are, as might be expected, from the development of the muscles of these organs (both of which are alike organised for flight) considerably the largest. Of the ganglia of the abdomen, we may here only notice the large size of the terminal one which supplies the organs of generation. In the moth—one of the lepidoptera the brain is almost spherical, but is indented by a longitudinal furrow along the median line. From its sides proceed the large optic nerve, now greatly surpassing the other cerebral parts in size. The oesophageal collar is triangular, leaving a very small interval for the passing of the alimentary gullet. The maxillary ganglion is relatively much smaller than in the dragon-fly, the blatta, and other mandibulate insects. The lingual chords connecting the brachial with the elytral ganglia diverge, to allow the passage between them of certain processes of the thorax giving attachment to the muscles of the legs. The elytral and alar ganglions are here blended into one large mass. The ganglions of the thorax have been observed in some species (as the bombyx distia) to present a reddish tint, whilst the large abdominal ganglion which succeeds them is white, like the brain. This is succeeded by four other ganglions, of which the last as usual is the largest. The nervous system of the Chaffer (*Melolontha*) has been dissected and delineated by Strauss with a minuteness and accuracy second only to those of Lyonnnet. In these beautiful plates are shown the bilobed brain with its auxiliary ganglia for the eyes and antennæ; the stomato-gastric nerves and small lateral cephalic ganglia are also clearly exhibited. The sub-oesophageal or maxillary ganglion is of an oblong form; the brachial ganglion is triangular; the elytral ganglion is of a circular; and the alar ganglion of a pyriform figure; these two latter being concentrated into almost a single mass, and radiating the nerves to the abdomen, like the termination of the spinal marrow called cauda equina. It is the median nerve of this series which supplies the organs of generation. The greatest degree of concentration of the nervous system is presented in the insects of the Hemipterous order. In the nepa or water-scorpion, for example, only three ganglions are present in its nervous system. The first, or brain, consists of two pyriform lobes in contact by their base. The maxillary ganglion is square-shaped, receiving the oesophageal chords at its anterior angles, and sending back their continuations from its posterior angles; these continue parallel with each other to the thorax, there expanding into a large rounded ganglion, much more voluminous than the brain, and from which radiates the nerves supplying all the rest of the body.

The progressive changes which the nervous system of the insect undergoes in its metamor-

phoses from the larval into the perfect state, have been beautifully and accurately illustrated by Heroldt in the cabbage butterfly; and by Mr. Newport in a species of sphynx; but Lyonnet had anticipated both these observers, in recognising as well the principle as the details of these changes, which he briefly describes at the termination of the monograph already quoted.

The twelve ventral ganglions of the larvæ are sub-equal and at regular distances; in the pupæ the inter-ganglionie columns are shorter, but the body being more abbreviated and concentrated, throws those columns upon curved lines. The eleventh and twelfth ganglions coalesce; the sixth and seventh disappear; the fifth blends with the fourth, the third with the second, thus leaving four ganglions in the abdomen, and two in the thorax. Corresponding changes take place in the cerebral portion of the nervous system. The maxillary ganglion decreases with the diminution and change in the maxillary apparatus. The œsophageal collar contracts as does the canal which it surrounds. The brain enlarges, having to supply organs of sense, especially those of sight, which are perfected to correspond with the acquisition of new and improved locomotive forces. Analogous changes we may naturally conclude to take place in other orders of insects; and we find, indeed, in some of these that the nervous system continues stationary at stages of development which are progressive and transitory in the Lepidoptera, and that further concentration is discovered to have taken place in the Cicada, Nepa, &c., than that which constitutes the highest stage observed by Heroldt and Mr. Newport. The marvel is, that these changes, due in part apparently to mere mechanical influences, should be so regular, so orderly, so admirably adapted in their final results to the general condition and exigencies of the perfect insect: one might have supposed that the particles of the soft and semi-fluid nervous matter, squeezed by pressure of the surrounding contracting parts, when the body seems to be, as it were, condensed by an universal spasm, would be irregularly dislocated or aggregated into one or more masses; but, on the contrary, we perceive the nervous particles moving forwards and re-arranging themselves in orderly groups, definite in their forms, in their proportions, and in their relative positions; these being apparently regulated by a law of prospective arrangement precisely in these situations where the greatest supply of nervous energy is required to radiate from them in the perfect insect.

The highest class of articulate animals, according to the condition of their muscular, respiratory and nervous systems, is the arachnoidæ. The nerves of the scorpion and of the spider, the principal types of this class, were then described: seven ventral ganglia in the scorpion succeeds the large cephalo-thoracic mass which radiates the nerves to the five pair of legs. In the abdomen the nerves are given off in a single fasciculus from each side of the ganglions. In the tail they arise by minute fasciculi, also from the intra-ganglionie chords; a blood-vessel accompanying the ganglionie nervous columns, and running along the dorsal surface, has been mistaken for part of the nervous system, and described as the motor column by some, and as a respiratory column by other systematists. In the diadem spider the ganglions are two in number, and confined to the cephalo-thorax. The first is *bifid*, anteriorly and connected by the sides of its base with the second ganglion, and sends branches to the eyes and oral organs. The œsophagus is below it. The second and more voluminous ganglion radiates four large branches on each side to the feet and muscles of the thorax, and sends two posterior branches into the abdomen, which, however, form no ganglion. The stomatogastric system is here represented by two nerves arising from the outer and posterior angles of the central ganglion and uniting below the intestine.

LOCK HOSPITAL.—The vacancy in assistant surgery, created by the death of Mr. Good, will be strongly contested by Mr. Lee and Mr. Stranger. Messrs. Acton, J. H. Johnson, and other gentlemen, are expected to offer themselves.

COURSE OF LECTURES ON THE THEORY AND PRACTICE OF MEDICINE.

Delivered by C. J. B. WILLIAMS, M.D., F.R.S., Professor of the Practice of Medicine, and of Clinical Medicine, at University College.

GENTLEMEN,—The subject to which I shall now draw your attention is that of *general* anæmia, or a deficient quantity of blood in the whole system. We may first notice that this state is accompanied by general *muscular weakness*, extending to the involuntary muscles, as well as to those that are under the control of the will; this fact is evidenced especially by the liability that exists to fainting, by the feebleness and smallness of the pulse, and by the great susceptibility that the heart exhibits to palpitation; there is often also a peculiar jerking or thrilling character in the pulse, which is occasioned partly by the spasmodic contraction of the heart's fibres, and partly by the diminished quantity and thin state of the blood in the arteries. This attenuated condition of the blood may give rise to the production of a murmur with the first sound of the heart; it also causes a loud continuous whirring murmur in the large veins of the neck. This peculiar sound is called by the French "*bruit de diable*;" that it is a venous murmur is proved by the fact of firm pressure upon the external jugular vein immediately arresting it. The only explanation that we can give of the occurrence of this murmur, is that the blood being of so poor and watery a nature admits readily of being thrown into vibrations.

2nd. Another attendant upon general anæmia is weakness and derangement of *sensation*; this is shown by the increased and morbid sensibility of the eyes to the influence of light, and of the ears to the effects of sound. There is, indeed, *general organic weakness*; the bowels are sluggish; the catamenia either scanty or altogether absent; the sexual power is impaired; the maintenance of temperature defective; the functions of assimilation and sanguification are imperfectly performed; hence the complexion becomes pallid, waxy, or sallow, varying according to the natural colour of the skin; the veins present a pinkish aspect in consequence of the transparency occasioned by the deficiency of blood contained in them. The *powers* of the system are weakened. The heart is unable to propel the blood with sufficient strength, and thus the equality of the circulation is disturbed, the extremities being at a distance are inadequately supplied, and are therefore cold and uncomfortable; whereas the brain and lungs, being much nearer to the circulating organ, receive a disproportionate amount of blood, and are thus liable to sudden and injurious excitement; hence arise headache, nervousness, spasms, chorea, catalepsy, asthma, dyspnoea, and the like. In consequence of want of blood, too, the functions of the whole alimentary canal are defective, and hence exist dyspepsia, nausea, vomiting, constipation, &c. The processes of nutrition, &c., being thus enfeebled, it is no wonder that we find debility and emaciation resulting from an anæmic state. There may also be infiltration of the tissues with serum, giving rise to anasarca; sometimes deposits of tuberculous and other matter may be produced; or, on the other hand, no perceptible reduction of the system may be observable, and the patient continue for many years without further disease supervening.

The exciting *causes* of anæmia are, generally, 1st, Scanty or poor food, especially such as contains little animal matter. 2nd. Excessive losses of blood, or discharges of other kinds when carried to a great extent. 3rd. Living in impure unwholesome air; a proof of the influence of this cause may frequently be seen in the pale and sallow complexions of those who are constantly occupied in mines; in this case there may also be the co-operation of another cause, namely, long-continued exclusion from the rays of the sun. 4th. Dwelling in malarious districts has a considerable effect in the production of an anæmic state. 5thly. Various organic diseases tend greatly to the impoverishment of the blood, especially those of a cancerous nature, also those affecting the lymphatic glands, the pancreas, spleen, &c. Any disease that interferes

with the free passage of the chyle must necessarily impair the character and quantity of the blood.

The *proximate*, or pathological cause, is not at present traceable; we do not know accurately where the blood is formed, and therefore cannot speak decidedly as to the cause of its defective formation. I may mention among the general causes of anæmia a singular *perversion* of the appetite that sometimes is noticed in chlorotic females; they appear to have a taste for all sorts of dirt and trash; such a condition would seem to depend upon something wrong in connexion with the *nervous* system.

The state of the menstrual function exerts much influence as predisposing to anæmia, for if the catamenia have been suddenly checked, or have been present in excess, and not properly regulated afterwards, the female subjected to the irregularity is very liable to fall into an anæmic state.

Another predisposing cause is an imperfect condition of the circulating system; we find an example of this in the occurrence of anæmia, after an attack of rheumatism, where the heart has been affected and yet not received special and requisite attention; so that although the rheumatism has been removed, the circulating organ has been allowed to remain the seat of some permanent and injurious change.

Treatment of Anæmia.—The obvious indication in the treatment of this affection, is to procure the formation of a large quantity of good blood. For this purpose we must furnish the system with a due supply of nutritious food, and we must furnish it also with the power of obtaining from this food the nutrition that it contains. For the latter purpose it is quite clear that *tonics* are the appropriate measures, viz., such medicines as will increase the *tone* of the constitution. Among the most powerful of these agents we must certainly mention *iron*: it appears to exert almost a specific influence in the removal of anæmia. One of the best preparations of this metal is the *sesquioxide*, which may be given in doses of ten or twenty grains three or four times a day. The *iodide* of iron is also a very useful preparation in doses of from one to four grains two or three times a day; this rapidly permeates the system, improving the digestion and increasing the strength.

But it not unfrequently happens that patients are not able to bear the administration of the stronger tonics in the first instance, and it is necessary to premise their use with milder remedies. It is well to commence the treatment by moderate doses of aperient salts, in combination with the milder bitters, and then to follow these up with more decided tonics; always keep in mind that you must give with your tonics occasional doses of aperient medicines so as to prevent obstruction to the required excretions from the alimentary canal.

With regard to the allowance of nutritious food much judgment is often requisite; we must not overtax the stomach with more or stronger nutriment than it can digest. The rule, therefore, is to adapt the supplies to the capabilities of the organs; if animal food can be borne of course it should be given, and the more that can be beneficially taken the better.

A most important item in the treatment of anæmia is *pure country air* with *moderate exercise*; they will often do much more good than medicine, and they will do it also in a shorter time. The use of the shower-bath and friction to the surface of the body are very serviceable.

All the secretions must be most carefully regarded, for no permanent benefit can be derived if they are allowed to be neglected.

We have next to treat of a condition precisely the reverse of that which has just been under consideration, namely, of *hyperæmia*, or the existence of *too much blood* in the system. In this case there is *distension* of the vessels, and thus, in addition to the exciting vital properties of the circulating fluid, there may arise mechanical irritation in consequence of its too great abundance. The effects that will be produced upon the economy under these circumstances will depend to a very material degree upon the rapidity or slowness with which the blood is moved, and hence we are furnished with a most important division of the subject, namely, one state in which the hyperæmia is accompanied by

increased motion of the blood, constituting what is termed *active* or *sthenic plethora*, and another state which is characterized by *diminished* motion of the blood, constituting what is termed *passive* or *asthenic plethora*. The word *plethora* is applied to these conditions in reference to the *whole* system, or to what is called *general hyperæmia*. But, like *anæmia*, the *excessive* quantity of blood may be either *general* or *local*, and the states which constitute *local hyperæmia* we designate by the terms *congestion*, *determination*, and *inflammation*. The former of these, viz., *congestion*, we shall regard as *passive hyperæmia*, and the two latter, viz., *determination* and *inflammation*, as *active hyperæmia*. You will understand these divisions more accurately by attending to the tabular arrangement that I have drawn up for your consultation.

HYPERÆMIA.

General.

With motion

Increased . . . Active or sthenic plethora.

Diminished . . Passive or asthenic plethora.

Local.

With motion

Diminished . . Congestion or passive hyperæmia.

Active Hyperæmia.

Increased Determination.

Partially increased } Inflammation.

Partially diminished }

We shall first consider *general plethora*, which is divided into *sthenic* and *asthenic*.

Just as we found *anæmia* proceeding either from *defective nutrition*, or *excessive excretion*, so we may have *hyperæmia* arising either from *excessive nutrition*, or *defective excretion*; in other words, it may arise from too much blood being formed, or from too little being used.

In order to the production of this general *plethora*, there must be good general health; the blood-making functions must be in an active condition, or of course there cannot exist a surplus of the vital fluid.

The primary symptoms of *plethora* are—fulness of the vessels; projection of the eyes; distension of the veins; laboured action of the heart; and the excitement by exertion of palpitation and difficulty in breathing. Under these circumstances a man is on the brink of various diseases, if no means are used for the reduction of the amount of blood; but if the *plethoric* state is permitted to go on increasing, it very frequently happens that after some unusual stimulus or extra exertion a fit of apoplexy supervenes; or it may be, and this is a far happier result, that some less alarming injury is sustained by parts whose suffering may prove essentially *beneficial* to the system generally; thus a diarrhœa may be induced, or some organ may be deranged, as for instance the kidney or liver, and by the determination of an attack of gravel, or of jaundice, the patient may be relieved of a portion of his superfluous nutrition. Organic diseases of the heart are very likely to arise in these *plethoric* states.

Another cause of *plethora* is the *diminution* of the *excretions*; thus, if looseness of the bowels is suddenly checked, or profuse catamenia suddenly stopped, or regular strong exercise, or periodical blood-letting omitted, or a long opened issue is dried up, or a leg or an arm removed and healed, *plethoric* mischief may readily be induced, because the activity of the blood-making process is not arrested in proportion to the diminution in the requirements of the system for such process. These causes do not, however, by any means always give rise to the occurrence of *general plethora*, for if a particular organ should happen to be weaker than the rest of the body, and thus more liable to suffer, it may become specially affected before general *plethora* has had time to supervene, and by these means such *plethora* may be prevented.

The influence of a large supply of blood upon the functions is undoubtedly *exciting*, the pulse is strong, the sensibility keen, and the powers active; this we may call *physiological plethora*; but if the quantity of blood be much increased beyond this point, and become *too* great, one of two results must inevitably follow, either the organs will be stimulated to excessive action, and *sthenic plethora* be produced, or the organs, being *overwhelmed* by

the weight of blood in them, will become as it were paralysed, and the opposite condition, namely, *asthenic plethora*, will be determined.

In *sthenic plethora* we find acute sensibility, active circulation, florid countenance, warm extremities, abundant secretions (if the *plethora* is not *excessive*). The heart becomes hypertrophied if this condition continues, and, indeed, ultimately many of the tissues may become altered. The arteries of the brain, being near the heart, are very liable to distension: if the force should be such as to cause *pressure* on the brain, the senses will be *duller* than natural, instead of being more acute, as I stated to be generally the case.

In this form of *plethora*, (viz., *sthenic*,) there is a great tendency to active hæmorrhage.

In *asthenic plethora* there is a *want* of irritability in the moving fibre, the heart becomes oppressed, it cannot impel its load, but suffers distension and enlargement; the arterial tension may be great, but the pulse is slow, labouring, and unequal; there may be a tendency to faintness, alternating with palpitation; the extremities may be cold, and the face, instead of being florid as in *sthenic plethora*, exhibits a purple or livid hue; the senses are duller, the bowels torpid, and the functions universally sluggish. This state also tends to apoplexy, for the vessels become over distended, and may readily give way, not being supported so firmly as the vessels in other tissues. If any organs should be weaker than the rest, they will be the first to suffer. But these are not the only effects of *asthenic plethora*, for the state of depression, to which we have been alluding, may speedily be exchanged for a state of *reaction*, which, in combination with the congested state of the capillaries, constitutes what is called *congestive fever*, which implies visceral derangement associated with general fever; it is indicated by nausea, vomiting, dry brown tongue, hot skin, dusky countenance, sopor, fetid excretions, &c. The precise cause of this condition is not certain, whether it arises simply from the congestion, or whether it is the result of some morbid poison to which the system in such a state is peculiarly liable, it would be difficult to determine.

The *treatment* of general *plethora* must vary; when it is accompanied with strength of fibre, and depression has not made its appearance, bleeding will be calculated to afford relief. It is important that the supplies of nourishment should be diminished, the food should be mild and unstimulating, alcoholic liquors must be carefully avoided. If the fulness be combined with excitement of the whole vascular system, not only blood-letting is required, but the *irritation* must be reduced; and the best method of effecting this reduction is the exhibition of *antimonials*, which operate by lowering the contractility of the fibres, and also by augmenting the secretions. *Purgatives* must also be administered in liberal doses as long as the pulse maintains its fulness, strength, &c.; the antiphlogistic treatment must be pursued. If the *plethora* continues long, we have its *effects* as well as *itself* to contend against.

In *asthenic plethora*, if the muscular fibre is weak, and all the functions depressed, and the tone of the system impaired, blood-letting alone will not succeed, but may prove exceedingly injurious, for if the vessels do not properly contract we may abstract blood from *one* part without relieving the fulness of *other* parts. We should, therefore, trust rather to the action of *mercurials* and *purgatives*, or we may even be required to administer *tonics*, in order to restore the strength that the fibres have lost by their subjection to continued pressure.

PHRENOLOGY AND INSANITY.

(Being a Paper read to the Phrenological Association at its Sixth and last Sitting, June 25, 1842.)

By J. G. DAVY, M.D., one of the Surgeons of the Hanwell Lunatic Asylum.

THE opinions advocated in this paper, which may be construed into an avowal of materialism, I beg you will understand are intended only to apply to the functions of animal life—to the entire and decided exclusion of all matters relating to metaphysics or theology. With the latter, indeed, I have

nothing to do—the consideration of it does not belong to the physiologist, but to the divine. Our object should be, and I hope is, to elucidate natural phenomena, to demonstrate cause and effect, as they are presented to us in man.

The observations already made by those gentlemen who have preceded me, have more particularly related to the healthy state of the brain; it will be therefore my province to consider more especially its diseased, or abnormal conditions. In treating on Insanity, nothing can appear more self-evident to all in the slightest degree acquainted with the subject than this fact, that a right comprehension of the nature and peculiar characteristics of diseased cerebration, must be necessarily preceded by a correct knowledge of the healthy function of the cerebrum. To the general ignorance of Phrenology, to the absence of all sound views of cerebral physiology, must be attributed the erroneous views so long entertained by not only the public, the uneducated, but also by the medical profession, concerning Insanity; and hence, too, the unscientific, the barbarous treatment, pursued in the management of this distressing disease. Under these circumstances, we cannot be surprised either at the immense number of incurable lunatics who crowd our public and private lunatic establishments and union houses, or at the protracted course of treatment the poor lunatic is too generally subjected, even should he be again restored to the bosom of his family and friends.

To all those accustomed to close reasoning, nothing will appear more certain than that a knowledge of the laws of optics, as well as a knowledge of the anatomy of the eye, must accompany all correct notions of ophthalmic surgery: analogous reasoning will of course apply to the treatment of cerebral diseases.

There is, moreover, an indissoluble connexion between healthy and diseased states of the same organs, in so far as the physiological inquirer is enabled, by a just and considerate review of circumstances, to determine facts and draw inferences at once conclusive and invaluable, and which it needs not be added must be regarded as the sure precursors of successful treatment, and to which end, it must be presumed, all our labours tend. Nothing is more common than to hear people inquire, "What is the good of Phrenology?" Such individuals may as well inquire, "What is the good of a knowledge of the particular nature of Insanity?" That surgeon only who is conversant with anatomical science could successfully undertake either the description or management of a dislocated joint. Who would then stop to ask—"What is the good of anatomy to the surgeon?" To the present time we have been bewildered by the speculative theories of a class of men whose opinions are for the most part no less delusive than they are incomprehensible; and thus the idea of ever unravelling the mysterious beauties of physiological science has been by very many considered utopian. The labours of such men, based as they are and always have been on false premises, necessarily suppose their conclusions to be no less erroneous. The existence, however, of associations such as this, must be regarded as an indication of the approach of a better and a purer state of things—of a state in which we have indications of a determination to unshackle ourselves, and throw off the horrid incubus which during past ages has been preying on our best qualities and laying waste our most exalted sensibilities; a fact which is in itself calculated to draw forth our best and greatest exertions to annihilate for ever the usurped machinations of all those who would sacrifice reason, the prerogative of man, to prejudice, sophistry, and political intrigue.

It will doubtless by this time be apparent to all, that the integrity of cerebration not only conveys an idea of a healthy condition of the cerebral mass or brain, but also such a conformation of the brain as presupposes its several organs so nicely balanced as will, under all ordinary circumstances at least, enable the individual to preserve his conduct and inclinations in harmony with the usages of social life.

The first position every one of course will immediately admit, and with the same readiness as he will be disposed to regard a morbid change of any

other organ (as the liver, heart, or lungs) as the immediate and inseparable cause of functional disturbance. For instance, in cases of consumption the function of respiration is impeded or disturbed only because the lungs are disorganized: no one in their senses would be disposed to disconnect a cause and effect so decided as this. It is impossible to relate the miseries which have resulted to the unfortunate lunatic from the circumstance that his insanity has been regarded apart from a morbid condition of a material organ, as a peculiar irregularity of some spiritual essence which has been supposed, stupidly enough, to pervade his organism. Under the influence of so inconsistent and antiquated an opinion, it followed, as an inevitable consequence, that all sound principles of treatment were neglected, and the poor patient became, in the opinion of those whose duties were, or ought to have been, to have soothed his sorrows, and calmed his diseased excitement. I say he became *doomed* to the unceasing afflictions and miseries of certainly the most distressing disease flesh is heir to.

Nothing is more sure than that all real excellence is secured by a slow progression. In the pursuit of science we advance only step by step; and, as a proof of such a position, it is only necessary to refer to the gradations which mark the onward course of cerebral physiology. To the Spiritualists have succeeded the class of philosophers known generally by the appellation of Materialists, who, in advocating the dependence of *mind*, hitherto so called, on cerebral organization, or, in one word, on matter, have effected no *slight* good, inasmuch as their labours had the effect of seizing on a *principle*, which has so far succeeded in the hands of contemporaries and subsequent investigators as to enable them to demonstrate the all-important truths of Phrenological science, and promulgate sound principles concerning the nature and treatment of diseases of the brain, *i.e.*, of Insanity. Until the recognition of such important truths, the idea of insanity conveyed but one impression: a lunatic was supposed a raging, furious, and ungovernable fellow-creature, with no other propensity than to bite, or injure in some way or other all who might happen to approach him, whether friend or foe. He was, in fact, regarded in much the same light as a mad dog. A correct knowledge of the healthy function of the brain, by affording the pathologist correct views of diseased manifestation or morbid cerebration, has explained to him how it is that the numerous shades, the interminable modifications of insanity, are as necessarily the result of cerebral organism, as inevitably consequent on the conformation of the brain, and as inseparable from it, as are the varieties of feeling, thought, and inclination, we witness in every-day life.

Everywhere in nature, in every modification of the material world, we witness a reciprocal dependency, a well-balanced and harmonious relationship of individual parts. What is true generally, is no less so in particular instances. Without troubling you, however, by referring to vegetable life, it will be plainly sufficient for my purpose to allude to the physiological relations and dependencies of animal existence. For instance, in a healthy man—one whose bodily functions are duly executed, whose organs perform their allotted office in the economy of life, whether they relate to the nervous, the vascular, the respiratory, or nutritive systems—we have evidences of an organism, with its several parts, as perfectly and beautifully balanced, as harmoniously arranged and reciprocally dependant, as are the several parts of a complicated piece of machinery. Now, no one would need to be informed, that if from any accident or other sufficient cause some interference were to arise in connexion with the proper and determinate adaptation of any two or more parts in this supposed machine, the irregularity in its action would be necessarily experienced by every individual part. What the many parts of an entire piece of machinery are to each other, so are the nervous, the nutritive, and the respiratory systems in man; and therefore it follows that any circumstance, or combination of circumstances, which would interfere with the healthy performance of either one or other of these animal functions, must necessarily proportionately derange the remainder: witness the intellectual and moral degradation of our labouring population, who—with

pity be it said—exhaust all their bodily energies in mere brute labour; witness the deplorable torpor and lassitude of the gourmand, the infirm and wretched health of him of studio-sedentary habits, if confirmation be required of these views. Now, what the nervous, the nutritive, and the muscular systems are to each other as the component parts of the human body considered as a whole, so are the individual parts of the entire brain to each other considered collectively, to the whole cerebrum. This fact, then, being admitted, together with the preceding premises, we are furnished with a basis which can alone supply us with data whereby to comprehend the nature and meaning of insanity—of abnormal cerebration, and which, according to the view here advocated, is satisfactorily shown to hold the same relation to part or parts of the brain as indigestion does to the stomach, or consumptive disease to the lungs.

Upon these principles, too, we are enabled to judge of temperaments in individuals. Temperament, therefore, must be regarded as a combination of those particular external signs which indicate the relationship to each other, in an individual case, of the different bodily systems above alluded to. All, however slightly acquainted with the laws of Physiological science, will immediately recognise the vast importance of the consideration of temperament to the elucidation of the subject of this paper, and which my limits preclude the possibility of referring to in a more extended form.

In both the medical treatment and general management of the insane, it is indispensable to allow both the judgment and the conduct to be exclusively influenced by the fact, that the brain consists of a plurality of organs, and that it therefore necessarily executes a plurality of functions, and that each function may be variously modified in the same individual, and within a very short time. No fact is more important than this. You will, I am sure, believe me when I tell you that it is this which constitutes the very basis of the non-restraint system, which is at this moment exciting the attention of both the scientific and humane in all parts of Europe and America. A knowledge of Phrenology exposes not only the ignorance of, but the mischief which must result from a belief in the lunatic's insusceptibility to acts of attention and kindness. The general integrity of the sentiments, of the kindly sympathies of his nature it is which can alone enable his medical attendant and friends to not only gain his attention, and ensure his confidence and esteem; by balancing with what remains of the better feelings of his nature—of, in one word, his humanity—the excited and diseased animalism which preys on him, but also enable them to seek out and apply in an efficient manner those remedies which are known to be best suited to his case. Herein, then, we see the *principle* of the non-restraint system as practised at Hanwell and elsewhere—a principle which, I must say, is in *itself* indicative of the improving state of the times generally.

Two or three weeks since, a young woman (M. C.) was admitted into Hanwell, closely restrained with a straight-waistcoat; she was reported “violent and dangerous.” The examination of the cranium revealed a very good development; the superior and anterior regions were full: she did not complain of local pain in the region of the propensities, neither was there the slightest increase of temperature; I therefore regarded the case as one of pure hysterical irritation of the cerebral mass. Being kindly received, and all forms of mechanical restraint immediately removed, she became convinced of our benevolent intentions, and quickly responded to the call thus made on her better feelings. The effect was almost electrical: in three or four days she was convalescent, and became employed in some domestic occupation in the establishment. She will, ere long, be discharged.

By tracing the development of the cerebral organisation through the lower classes of animals up to man, the anatomist is struck with the improved organism of all those animals which successively occupy a rank nearer and nearer to him; and, in connexion with which anatomical fact, the physician or surgeon of course discovers a proportionate modification of cerebrating power.

I need hardly say I am here speaking of healthy function in connexion with normal structure; in the converse, however, that is, in cases of insanity, I have frequently witnessed among my patients at Hanwell indications of a particular abnormal cerebration, which has forcibly reminded me of the specific and healthy characteristics of animals lower in the scale of organisation. I merely mention the fact as highly interesting; I cannot here, for very evident reasons, particularise my assertion; it is, however, valuable to all those engaged in pathological inquiry.

Being much in the habit of analysing insanity with the aid of the external manifestations of it, which the speech and actions of the lunatic supply, I have thought that, to obtain the most correct perception of the real state of the brain, it is only necessary for us to recur to the state of dreaming. If we watch a lunatic patient, and mark well his gesticulations and character of conversation, we shall perceive very much of what I would regard as a state of *active dreaming*; that is to say, a condition which would seem to realise *action with unconscious thought*; and in which we perceive evidences of functional power, though deranged, of most, if not all the cerebral organs. An insane person often reminds me of one asleep and dreaming with his eyes open, and in the exercise of his motive powers. I believe it is only during comparatively *sound* sleep that one or two only of the many cerebral organs remain in a state of activity, the remainder being in a state of repose; and that during sleep less sound dreaming rather consists in a negative state of repose, so to speak, of the whole brain. In really sound sleep, of course the cerebral mass is no less entirely inactive than the muscular powers. I mention this, in order to make you understand what I conceive to be the real condition of the brain of the lunatic generally. I will add, the dreamer with one or two organs alone active, I should be disposed to consider as a sleeping monomaniac; and another, with the cerebral organs in a condition which I have described as a “*negative state of repose*,” may be not inaptly compared to the patient whose insanity is marked by incoherence.

I have here a sample of this form of disease, for which I am indebted to the assistance of my friend, Dr. Engledue. We visited the patient together, and I believe we have succeeded pretty correctly in giving verbatim her conversation, when coaxed to speak by our apparent respectful attention to her. The patient (E. M.) is pretty commonly engaged walking up and down the ward or airing-ground, absorbed in her own unceasing gossip.

“Claim discharge. Eastgate, yes. A man and his wife, and country-house. Cannot accommodate, Death and remittance. They kept me privately. made a wall of me—made sheets of gold of me, and a gold grating. These are stinging-nettles. Sycamore house. Christmas food. Raisins and currants. Cucumbers on one side. Know the landlady. Grape-trees. That is aged prophetess. Fine person. Italian image-girl with two children. Missing at the farm. Peacocks and peahens, and father gone away with the property. Children stolen. Gipsy-people out of an airing. Court Eliza Rachael White, wife of Hanson Sampson. He is diseased. Palace, nature of clear property, according to power of law, was murdered. Had two children, with two seats. Commercial mind. Wake them out of sleep, and children. Know the prophet. Is palace large to let lodgings? Household. Move the palace by the power of water. Blue and white. The land filled with gold steps and jewellery. 13,000 children and seraphs. Some glass cases. Choked and gold-steps.”

Here we perceive a condition of cerebration where most or all the organs of the brain having lost their controlling power, as in sleep, are acting so spontaneously that one is almost irresistibly reminded of the confusion presented in the conduct of schoolboys during the temporary absence of their preceptor. I will recite a second case:—“Yes, bookseller. Mind, and put the fire out. Clean the boots. Clean the windows, back and front; and found my scrubbing-brush in St. James’s workhouse. Back parlour of Mrs. Martin’s, and gives everything back again. Mrs. Ellis and Mrs. Jones in the kitchen. The Lord’s kitchen.

Found the book again this morning; hymn-book. Nurse got it now. They try to do me out of the day of the month. I dream for a few minutes. So very particular! My place that has been haunted. Well, Joseph! Call to my cousin. Tom Jennings chaws the tobacco." The enunciations of the insane are generally so rapid that I could not undertake to say that these specimens of incoherence are literally correct; yet, I can assure you, they are very nearly verbatim, and are, at any rate, sufficient for the purpose intended.

By attending to the conversation of the monomaniac, on the other hand, we shall perceive a unity of design, so to speak, in all he says. The annexed will convey my meaning:—Some few mornings since, in passing through the ward in which is the patient I am about to particularise, she thus accosted me:—"Have you sent the letter I gave you to Prince Albert?" I replied, Yes; and then begged her to give up those strange notions. "Give up, indeed," she exclaimed; "No, I have suffered too much—Give up the rights of all my children? No, no; my bishops, and my generals, and my government, all tell me that I am Prince Albert's prisoner. No, Dr. Davey, I must, I will have my rights—I am the rightful heiress to the throne, and I won't be kept here a prisoner." In this way, if encouraged, she would go on for an immense time. Speak to her, however, on any other subject, no matter what, and she is as well and as sensible as any one here.

There is a male patient (P. H.) in Hanwell who calls himself Jesus Christ: generally speaking this man is one of the most sensible and best-informed patients in the house; his moral perceptions, too, are most correct; he is kind and generous to a great degree. Listen to him now when under the influence of his delusion: "I'll drop you dead, you villain! Eternal flames, by God, as God: I happen to be that person. My father, God, concludes all his prayers in my name. Jesus Christ, I am he! Look in my Scriptures, you see my description. Ah! you may grin—I'll drop you dead, you villain! I'll give you eternal flames. By God, as God, I happen to be that person." In this strain he may be made to run on for an immense time, yet this same man has not unfrequently astounded me with the force and originality of his observations, and the kind and generous manifestations of sympathy for the distressed of life. Between the extremes here quoted, every possible modification exists, a modification in every instance commensurate with the number of cerebral organs which may happen to be affected. Now, that I am speaking of monomania, I am reminded of a series of very beautiful experiments I had the pleasure of witnessing some ten days since at the house of Dr. Elliotson. I allude to the magnetic excitation of cerebration, during which I was no less astonished than gratified in having the opportunity of witnessing in one individual more forms of monomania than I have ever seen even within the walls of Hanwell, or elsewhere; and each individual form of the disease was so splendidly illustrated, that I very much doubt if even the reality could under any circumstances have excelled it. The pencil of no artist, whether living or dead, could have by any possibility surpassed the original, and not even a Siddons, a Rachel, a Kean or a Maeready, with all their surpassing histrionic excellence, could even wish to do more than copy it. No art, ancient or modern, could possibly give better expression to the natural language of intense feeling. I am strongly disposed to think that animal magnetism will be found, ere long, indispensable as a remedial agent in the treatment of the insane.

To resume, however. Such being the view I take of this question, it follows that an examination of the cranium in such forms of disease,—excepting of course monomania,—is no more likely to give us the character of the insanity, or to clear up any doubt that may be entertained respecting its existence, than it would be likely to enable the phrenologist to divine the nature of a dream itself. It is, I believe, important to society at large to be aware of this. I find that many of the visitors at Hanwell expect that it is only necessary to examine the head, and a clear view is immediately gained of the character of the malady. Nothing, however,

can be more absurd. I have before spoken of the balance of the nervous, the respiratory, and the nutritive systems, and so on, in man, as necessary to health; and I have also mentioned to you, that it is on the same principle that a corresponding balance of the cerebral organs must be preserved, if we would maintain healthy cerebration. To repeat what I have before illustrated, a strictly healthy man must be regarded as one in whom the individual parts of his body are in strict harmony—as one in whom the temperaments are nicely adjusted. Now disease, it is well known, is either congenital or acquired; and this is true, whether it relates to the brain, heart, lungs, liver, or, in fact, to any one organ of the many which make up the entire organism of man. Disease of the lungs is either congenital or acquired: so is disease of the brain. An individual with a small and contracted chest, with, in point of fact, a physical deficiency of lung, is predisposed to consumptive disease; and, on the other hand, that person in whom there are large abdominal organs,—one of the indications of the lymphatic temperament, is no less surely prone to diseased action of those particular viscera. Thus, then, we see that size must be held as a measure of power, not only considered in reference to the brain, but also when viewed in connexion with the other parts of the entire system; and this position is equally true, whether we regard the whole brain, or its individual portions. An unbalanced organism, then, whether congenital or acquired, is for the most part to be considered as that particular state which predisposes to diseased action, and which, once established, is too frequently the cause of a similar abnormal condition in the offspring. It is only necessary to refer these observations to the immediate subject of this paper, viz., the consideration of cerebral physiology as applied to insanity, to appreciate the general physical conditions which attend on many forms of this too common disease, and on monomania more particularly. The few cases of genuine monomania I have witnessed strongly confirm this view of the case. In Hanwell there are two sisters suffering from religious delusions; in them the organs of Hope, Ideality, and Veneration are very full, and disproportionately large when considered in reference to the whole brain.—H. M., a young woman, a patient, also at Hanwell, admitted nearly a year since, is afflicted with a variety of fancies really indescribable; her delusions are strictly visionary, and can hardly be discovered to have much relation to mundane affairs: there is some religion mixed up with her fancies. The organs of Veneration, of Hope, Ideality, and Wonder, are all large, and in this case also disproportionately so, when considered relatively to the whole brain. During what was considered health, she displayed a great deal of romance, of ardent imagination, and was always fond of what is called "building castles in the air." I have observed that among insane patients, however variously afflicted, it is common for them to hold conversations with imaginary beings. I have generally found the organ of Wonder large in such instances. Of course I am here speaking of idiopathic insanity, or that form of abnormal cerebration existing independently of the particular states of other organs.

(To be concluded in our next.)

DISLOCATION AND FRACTURE—THEIR NATURE AND TREATMENT.

By J. NOTTINGHAM, Esq., Surgeon, Liverpool.

Continued from p. 269.

THE manner in which a fractured limb is placed on the apparatus destined for maintaining it in that position which is regarded as most favourable to the reunion of the broken extremities of the bone, is a matter of great importance to the practical surgeon; hence, the variety of investigation and contrivances, for the purpose of attaining the end we have in view, by placing the parts in the most easy position which is compatible with the quiet of the fractured pieces of bone, and in this state maintaining them for a sufficient length of

time by such splints or apparatus as are easy of application, and possess the most complete retentive power, without giving pain or producing avoidable irritation. As with different surgeons the mode of treatment adopted for cases of fracture varies exceedingly, not only in mechanical detail, but sometimes also in principle, it is obviously one of our great duties to have some settled notions on the matter, which should be the result of an attentive observation of the practice of others, or of their writings on the subject, compared with the results of our own experience, and tried by anatomical knowledge, and by physiological and pathological principles.

The feelings of the sufferer, as well as the dictates of common sense, suggest to us the propriety of placing a patient who has met with fracture of the leg or thigh, either on his back, or on that side where the injury has occurred; the opposite position to either of these would evidently be painful, for in it the parts could never maintain the same relations for any considerable length of time.

This has led to the general adoption of two different modes of treating fractures of the lower extremity; one by placing the patient on his side, and supporting the injured limb on pillows; in the other, placing him on his back, the posterior aspect of the injured limb being maintained by convenient apparatus, varied so as to suit the peculiarity of the fracture, or the opinion of the surgeon; for of the latter method there are two important varieties to be noticed; in one the limb is in the extended position, in the other the leg is gently bent backwards, and the limb rests on the outside of a triangular box or double-inclined plane.

Where the box just mentioned is used, the angle is generally fixed, but where the double-inclined plane of modern construction is employed, the angle can be varied at pleasure, by changing the fixity of the rack, and raising or depressing the central hinge of the mechanism.

It is easily understood that the instrument made as above noticed, which allows slight variations to be effected in the relative position of the leg and thigh, possesses some advantage over that which is also a double inclined plane, but without means of allowing its elevations to be altered at pleasure; for we not unfrequently find, that keeping the knee-joint for a considerable time in exactly the same state, without relieving it from the fatigue thus produced by change of position, is followed by troublesome consequences, especially that stiffness of the articulation which in many cases requires weeks or even months for its removal.

So that any mechanism, which is at the same time applicable and well contrived in other respects, and which allows of such changes in the relative position of its different parts, as enable us to suit it to the peculiarity of individual cases, will be found to be all that is wanted for the retention of fractures of the lower extremity, and should be kept in readiness by every surgeon under whose care such injuries are likely to come.

But beyond the necessity of having a means of altering the angle of the double-inclined plane, when this is employed, there is yet another difficulty to be mentioned, which is connected with variety in the size of fractured limbs, and this of course is without bounds; so that it would be impossible for any one to possess, never mind how many sets of apparatus he might have, an exact fit for every case.

Hence the necessity of some contrivance attached to splints for the lower extremity, particularly of the more expensive kinds, which would allow them to be securely adapted to limbs of different sizes.

As surgical instruments and apparatus are not made for the filling of drawers, closets, and lumber-rooms, that is desirable that they should be as few and as efficient as possible; and we can easily see how much more advantageous one perfect apparatus must be, which shall combine the advantage of a hundred or indeed of any number, by adapting itself with ease and precision to the size of any injured leg, or the peculiarity of any particular case, than could be a host of the varied and often clumsy contrivances sometimes to be met with in the splint-rooms of hospitals, but whose application, imperfect and seldom seen, prevents the sur-

geon remembering its nature, or the student caring to understand it.

We have not as yet passed in review all the objects to be contemplated in choosing an apparatus for the treatment of fracture, especially of the lower extremity; for we have yet to recollect, how exceedingly troublesome the heel now and then becomes, particularly if slight ulceration take place, for want of some means of supporting this part without allowing the weight of the foot to fall upon the posterior prominence of the os calcis. This having often been neglected by the makers and contrivers of splints, kind mothers and nurses were obliged to rack their invention to produce something which should alleviate this additional torture of the unfortunate sufferer, by supporting the foot without allowing it to rest on the most prominent part of the heel; and for this purpose various contrivances were resorted to, of which the ring-pillow under the heel and supporting its outer border, or an additional small pillow under the lower part of the leg, were amongst those most frequently employed.

In Mr. Liston's splint the prototype of everything of the kind, which is at once efficient and cheap, an effective means of warding off this inconvenience is met with, so that indeed we need scarcely ever have to complain of it again. By a little additional contrivance, however, and a small addition to the expense, this part of the apparatus may be more completely prepared for the reception of the heel of the patient, and made more independent of the occasional addition of loose cushions and pads, as will be mentioned more particularly in describing the apparatus now generally employed in Liverpool.

It is not always an easy matter, especially for the country practitioner, who is deprived of the advantages which large towns afford in the way of surgical apparatus, to treat as he could wish those cases of transverse fracture of the patella, which, if united by a long portion of intervening ligament, inevitably weaken the injured limb, and are followed by a disagreeable want of firmness and limping in locomotion.

In the splint-rooms of hospitals we sometimes see various wooden and clumsy contrivances for elevating the limb, and assisting the approximation of the two portions of fractured patella in such cases; but these machines are only cumbersome, even in great public institutions, and would be more so to the private practitioner, for whom it has been a desideratum to have the apparatus for ordinary fractures of the leg and thigh and that for fractured knee-pan in one light and convenient whole.

For injuries of the hip, and fractures near the trochanter major, we not only require that the limb shall rest safely on its posterior surface, but in many cases we find it requisite to attend to the outer aspect of the parts, by prolonging the external splint up to or even above the crista of the ilium, after the method of Volpi, Desault, or Velpeau; thus requiring an additional contrivance which must be superadded to all which we have hitherto noticed in attempting to trace out the requisites of a perfect splint.

It will, I think, be readily admitted, that any single apparatus, which will enable us to treat effectually the various injuries to which the lower extremity is liable, such as injury of the hip-joint, fracture of the cervix femoris, fractured thigh, fractured patella, rupture of the ligamentum patellæ, injury of the knee-joint, fracture of the leg, and compound dislocation of the ankle, and which combines the advantages of most instruments previously used, must be a great acquisition to the practical surgeon, and a valuable addition to the *armamenta chirurgica* of public hospitals.

It is for the reader to judge whether the splint we are about to notice is not calculated to answer all the indications which we have hitherto insisted upon as important.

Before describing the splint in question we would remark, that during the time for which a patient with fracture of the lower extremity is confined to his bed, it is a matter of some moment not only that the limb rests securely on the splint, or is steadily secured by it, but that the apparatus itself should also rest steadily on the bed, and for

this purpose it is evident that it must have either an extended inferior surface, or a corresponding widely-spread outline of support.

This fixity of the splint on the bed has been well attended to in the excellent splint of Mr. Liston, the main support of which is at the extremity corresponding to the heel; but even this apparatus has not, perhaps, that firmness and solidity which in every case we think so desirable.

Description of an apparatus for injuries of the lower extremity, made by Mr. F. Clarke, Liverpool:—

In this splint, the part resembling Mr. Liston's is somewhat modified; it has no screw under the junction of the leg and thigh pieces, each of which, instead of being kept along with the other at any particular angle by the said screw, is supported on a forked-iron rod, attached to it by a hinge-joint underneath, its other extremity being so arranged as to slide in an horizontal groove formed on each side of the support or frame of the splint which rests on the bed. This sliding motion is arrested at any point along the frame, by a screw which is attached to the foot of either support, and so the splint rendered firm in any position upon its frame.

The sides of the frame are covered with plates of brass, which facilitate the motions required; and at the fore part corresponding to the situation of the foot, the splint and frame are so articulated as to prevent any lateral deviation; but this juncture can be separated if required, and the whole length of the conjoined portions of the splint raised to any convenient angle with the frame, thus allowing the limb to be placed in that position which is frequently adapted for the treatment of fractured patella; or the conjoined portions may be laid flat upon the frame, so as to afford a perfect apparatus for the treatment of fracture in the extended position.

An additional thigh-piece slides under the upper or posterior portion of the instrument, and may be drawn out, so as to lengthen it, and then fixed by the accompanying screw; for this extremity also additional lateral pieces are contrived, external and internal, and each fixed as circumstances may require by two screws. These will occasionally be wanted during the treatment in the straight position, the outside one to pass beyond the crista of the ilium, the other to go towards the upper and inner part of the thigh.

The foot-board may be gently drawn downwards, or pushed upwards, by the screw attached to it, which is seen projecting from the extremity of the instrument; by this means the position of the foot may be regulated, and any requisite extension easily and securely obtained.

The fundamental part of the contrivance for protecting the heel, is the same as in Mr. Liston's splint, but the leather sock belonging to it affords an additional facility for raising the foot from the iron part of the apparatus, and thus as it were slinging it more safely.

The rectangular frame of wood, without being heavy, is of such shape and extent as to rest securely on the bed, and its steadiness is further increased by transverse bars of iron at either end, which fold up when not wanted so as to take nothing from the portability of the instrument, allowing it to be packed in a case of moderate size.

There is a long pillow for the splint, a body girth, and padded strap for the groin, rendering the appendages complete.

The advantage which this apparatus possesses over others previously employed are so obvious as to require but little notice at present.

It serves at once the purposes of a double-inclined plane, and of a straight splint.

It admits of being employed for raising and supporting the leg and thigh in the treatment of fractured patella.

It combines the advantages of several apparatus of different sizes.

It affords a more complete protection to the heel than any splint hitherto employed.

It supplies a means of producing extension in cases of fracture, where this may be required, in a most safe and gradual manner, and withal has less the aspect of a complicated apparatus than many contrivances hitherto in use.

The screw for drawing down the foot will be found peculiarly useful in some cases of compound dislocation of the ankle-joint, where it is often so difficult to retain the parts in their right relative positions after the dislocation has been reduced.

HOSPITAL REPORTS.

ST. GEORGE'S.

Compound Dislocation.—Mr. D—, admitted Sunday, July 3rd, 1842, (Wright's ward,) with wound in left ankle of some extent, through which protruded the articular extremity of the tibia; the foot was everted and, the leg appeared greatly distorted. The fibula was found to be fractured at about the junction of the lower, with the middle third. The accident occurred from a four-wheeled chaise, in which the patient was riding overturning, some part of the vehicle striking the outer part of the leg; from the confusion occasioned by the horse running away, he cannot tell distinctly the nature of the accident as regards the application of the force, which must needs have been severe to produce the appearance of the limb, hereafter to be described. In the absence of Mr. Keate from town, the care of the case devolved upon Mr. Cutler, the senior assistant-surgeon, who having examined the limb found that the wound extended into the joint, whilst the tibia was advanced in front and to the side of the astragalus. On passing the finger over the articular surface of the astragalus, it appeared rough as if fractured or denuded of its cartilage. It was one of those severe cases of compound dislocation in which it could scarcely be deemed safe to leave the patient to the chances of recovery with an ankylosed joint, especially as the subject had been probably in the habit of living above par. Mr. Cutler, therefore, suggested immediate amputation to the patient, who after a short consideration consented to it. The following operation was performed about three hours after the receipt of the injury. The tourniquet being applied to the femoral artery, Mr. Cutler made a circular incision, about four inches below the patella, through the integuments and fascia, which were drawn up by an assistant, the muscles were then divided in the ordinary way, and the bone sawn through. After the arteries had been secured, a great deal of blood still poured out from the veins which were varicose, and so large in some parts as to admit easily the tip of the little finger into them; these then it became necessary to secure with ligature, and as many as fifteen were applied to the stump before he was removed from the theatre. A piece of lint wetted with cold water was placed over the wound, in order to admit of the ready application of ligatures if hæmorrhage should come on with the decrease of faintness which the loss of blood had induced.

The appearance of the amputated limb was as follows:—A large wound extending half way round the ankle with protrusion of the articular surface of the tibia. The inner malleolus broken off was retained in its place by the ligament common to it, the astragalus and os calcis. The strength of the inferior interosseous ligament had enabled it to drag a portion of bone from the tibia, so that the protruded portion was sharp and with a ragged edge. The lower end of the fibula remained still attached to the astragalus whilst it was much displaced above from the position of the foot. Some muscular fibres and the anterior tibial artery had been ruptured, and caused a large quantity of blood to be effused into the surrounding structures. The fractured malleolus attached to the astragalus had given the sensation of comminuted fracture of this bone, it not being desirable, on account of the pain caused by an examination

of the wound, to ascertain the point precisely, neither would the knowledge of it have afforded any practical guide for the treatment of the case.

July 4. Secondary hæmorrhage to some extent came on about two hours after the operation in spite of the application of ice and the exposure of the wound to the air; seven additional ligatures were applied to restrain it. To-day there is some excess of warmth in the skin, the pulse 120, full, probably caused by the excitement of the pupils and surgeons being round him. He slept pretty well last night. His bowels have been gently moved. The wound was brought together by a few strips of adhesive plaster, and a bandage placed round the leg and thigh.

Hæst. Salin. 3iss.

Tr. Opii, m. xx., vespere.

5. The tongue is coated and inclined to be brown and dry. Bowels not moved since their first slight action on the 3rd. He did not get much sleep in the fore part of yesterday evening, although he took two doses of laudanum, probably from the tightness of the bandages, which were relaxed a little. Pulse 130. Skin hot, slightly perspiring. No hæmorrhage since the stump was dressed; not disturbed to-day. He does not complain of pain in the course of the veins or absorbents.

Hæst. Scannæ, 3iss. statim.

Hæst. Salin. 3iss. 4tis horis.

Ol. Ricini, 3ss. vespere.

6. Pulse 130. Tongue dry and coated. There is a foul discharge from the stump. Hectic and flushed appearance of face. Bowels freely opened by medicines. Has vomited bilious matter. To have two pints of beef-tea and arrow-root, three ounces of brandy, and two bottles of soda water daily.

Ammon. Sesquicarb. gr. iij.

Hæst. Salin. 3iss. 4tis horis.

7. Has taken the above stimulants and is somewhat better to-day, the pulse being less frequent and not so easily extinguishable. To continue the same medicine.

8. Tongue still dry; pulse 100; less irritable but exceedingly restless at night; he doses frequently during the day. The stump discharges freely, not the slightest adhesion has taken place; the muscles protrude beyond the skin, and it looks altogether in an unfavourable condition. Some ligatures came away by applying gentle traction. Bowels inclined to be costive.

Hyd. Chlorid. gr. iij.

Opii, gr. ss. hæ nocti s.

Ol. Ricini. cras mane.

Tr. Opii, m. xxv., vespere.

9. Bowels have been open several times. Pulse 90, weak. The stump discharging freely and apparently healthy pus; cannot get any rest at night.

10. The discharge continues free, but soon becomes offensive. He appears much weaker and cannot get any rest at night. The pulse continues of large volume, but of an easily compressible character. A slight scratch which he received on the nose does not readily heal, being inflamed at the edges, as if from want of tone in the system. The patient's state is not altogether favourable to recovery. Three ligatures came away. He takes no medicine only the soda water and brandy, with whatever nourishment his stomach can manage, which is irritable, and rejects almost everything he takes.

11. Tongue brown and dry; pulse weak; bowels open; gets no sleep. Stump discharges but moderately. The skin does not still cover the muscles, and it looks dark and ill-condi-

tioned round the edges. Some ligatures still remain firm in the wound.

12. Some erysipelas has appeared on the right cheek, which is red, hot, and swollen; patches of erysipelas are also seen on the neck and thorax. The tongue is dark, brown and exceedingly dry. Pulse 112, weak; slept about three hours last night. Takes his soda water and brandy. To have some jelly.

13. The erysipelas has extended over the left cheek; there is great want of power in the system, and this is consequently of an unhealthy character. He does not appear to take so much notice as usual of surrounding objects. The abdomen is tympanitic very tense and distended; he has not had an evacuation these two days. Tongue not so dark coloured, but still exceedingly dry; pulse 120; complains of want of sleep.

14. Much worse in every respect.

15. Died.

In reviewing the circumstances of this case, we find that the extent and complication of the injury was such as to render it unwise and unsafe to try to reduce the dislocation and heal the external wound, the laceration of the muscles and effusion of blood would have rendered the attempt abortive, whilst the constitutional disturbance hereafter would inevitably have destroyed the patient. In amputation alone the patient had a chance of surviving. What rendered this mode of procedure unsuccessful? We find, first, an unfavourable condition of the veins, which were so dilated as to require to be secured by ligatures; these are always more or less injurious to veins, but their number in this case rendered them hurtful to the stump, preventing its uniting, and producing profuse discharge by their presence. With regard to the time selected for operating, might it not have been too early? The patient in comfortable circumstances, in the midst of enjoyment with his friends, suddenly brought into an hospital with a severe accident, is little likely to bear an amputation well under the excitement of his new situation. In many cases of severity we think that amputations are performed too early, and that they would be more successful, probably, if delayed to the latest period that is consistent with the patient's welfare, until the patient, so to speak, has recovered from the mental collapse under which he labours. Again, another source of failure might be attributed to the patient being one not exactly suited to bear a large operation. A man of full habit, probably accustomed to take wine and spirits and porter, with a large allowance of animal food daily, whose urine is high coloured and excessively acid, cannot bear to have his usual stimulants cut off and be suddenly depleted; such a patient was this, and notwithstanding the early exhibition of stimulants, we find him soon labouring under a low inflammatory description of erysipelas, characteristic of want of power. The previous cases of compound dislocation at this hospital have almost invariably terminated fatally, unless amputation has been performed, and it has almost become a maxim to operate, not only on this account, but also because the patients usually being of the lower class are able to get a better living with a wooden leg than with an ankylosed joint, which is liable constantly to injury and disease. In the country, however, such a rule would not be enjoined by the surgeons where the subjects are healthy, when there is fresh air, or comfortable circumstances; in the cure of these cases many provincial surgeons gain great repute, simply from the different circumstances and class of cases in which they are placed, and with which they have to deal.

PHRENOLOGICAL ASSOCIATION.

To the Editor of the 'Medical Times.'

SIR,—You are probably aware that the consequence of the address delivered by Dr. Engledue to the Phrenological Association has been the resignation of many of the members; and perhaps, in reality, the dissolution of the Association. Had Dr. E. considered well the times in which he lives, the condition of society, and the prevalence of the prejudices which he desires to combat, he would have abstained from uttering doctrines which, whether true or false, are incapable of proof, and which having brought forward, and on an occasion like that of the opening meeting of the Phrenological Association, were sure to excite alarm, and cause disunion. He should have recollected that there are various points of investigation which it is necessary to attend to, before any man can be entitled to lay down such a doctrine, as that there is no such thing as mind, no spirit, no immortal spring attached to the body. Dr. E. seems to imagine that nothing can exist because it is not seen. Dr. Barclay objected to phrenology, that on dissecting the brain, he could not see the individual organs. Dr. E. speaks of the secretion of thought: can he see this secretion? Speaking of his mesmeric experiments, he says that he placed his finger on the organ to be excited, and *willed* it to be excited; can he see the will? Is it or the influence material? Is it also a secretion? Does he maintain that secretion takes place without previous action—or, if with action, does he pretend to say, that the action causing secretion has no exciting cause? Supposing I were to admit the truth of Dr. Engledue's doctrines, I am unfortunate in not being able to perceive the *cui bono* in promulgating them at the present time, and throwing the apple of discord among phrenologists, and not only that, but giving tenfold excitement and power to those very prejudices against which he would war, and throwing back the advance of phrenological truth half a century at the least. That brain is necessary for thought no phrenologist can deny, but in what manner it is so no human being can tell, or ever discover, let the microscope be ever so powerful, nor is it possible to demonstrate that there is no such thing as that which is denominated by the conventional term mind. I cannot understand how Dr. E., with so fine an intellectual development, should be wanting in judgment to such a degree, as not to have perceived the utter uselessness of giving offence to overpowering masses of ignorance, as well as of stirring up those who seem to take deep interest in keeping the masses ignorant. The latter will be fools if they do not raise the cry, that phrenology has at length unmasked herself, and proclaimed atheism, and materialism, and the irresponsibility of man, as the doctrines she teaches, and consequently that there is no such thing as religious obligation. Does Dr. E. imagine that he has not added to the strength of priestly domination, nor dug a pit in the way of liberal education? Much, indeed, have I mistaken the probable effects of his unwise proceeding, if it do not rouse bigotry into violent action, and throw back into the hands of the priesthood the power that liberality had wrested from it, and raise obstacles to the advance of the great truths of phrenology, such as will not be thrown down in the lifetime of any phrenologist now existing. The minds of men require to be prepared for truths which oppose their prejudices. They cannot be taken by storm as all history proves. Dr. E. has already seen in the resignation of so many members of the Association a portion of the consequences of his rashness, and his hope of making a favourable impression blasted. Should the public voice be now raised against phrenologists generally, as holding such doctrines, it is probable they will be prepared to disavow them. The doctrine is at best hypothetical, and when there is no proof that can be seen by all ordinary minds, it is as well to let the doctrine sleep, since it can do no good, and will do much harm to the cause of truth.

A PHRENOLOGIST.

TO CORRESPONDENTS.

PHRENOLOGICAL ASSOCIATION.—*Mr. Simpson, whose public career and private virtues give him so many claims to our admiration, claims from us the courtesy—he might have said, the justice—of correcting the Report of the proceedings of the Phrenological Association, sent us by a correspondent, and inserted in our number for July 23. "My address," he says, "was not meant to prove the wisdom, power, and goodness of God by Phrenology, but his existence from the design evident in the adaptation of the mental faculties to man's place in creation. The proofs involved many collateral evidences of the wisdom, power, and goodness, but these were not the main objects of the argument. Amateness, as a proof of design, had merely its place among others, and was allowed, by good judges present, to have been innocently and delicately treated of. As mere physical love it was not once alluded to, but was at once elevated into the company of the moral sentiment and idealism, forming then, one of the purest as well as most delightful emotions of the human breast. The 'warmth' was called forth, not for the 'amateness,' but for the gratuitous benevolence which blesses man in his helpmate. It was," he adds, "scarcely prudent to give the enemy another handle against phrenologists, by insinuating that they give utterance and listen to indelicacy in their public discussions." We are very happy to give insertion to this explanation, though we think we may assure Mr. Simpson that our correspondent had no intention that his words should have been supposed to bear the meaning attributed to them.*

W. H.—We shall hope to explain the process more at large next week.

DIDO—We can say nothing of Mr. Wakley under present circumstances.

X. Y. Z., Mr. J. Burton, Delta, M. S., Enquirer, A Friend, A Mesmerist, received.

Mr. S.'s letter declined for the reason suggested. We regret also we have no space for the communications of G. W., Mr. H. B., Dr. F., Crito, Castigator, A Lover of Truth, &c. The time and space, which were to be annihilated to make two lovers happy, must be vastly augmented to place our correspondents in the same condition.

A monthly medical periodical has, we perceive, quoted the whole of our report of the medical proceedings of the British Association (procured exclusively for the "Medical Times,") and favoured us with no acknowledgment. We shall consider this an oversight in the respected editor if nothing of a similar kind occur to suggest a different opinion.

THE MEDICAL TIMES.

SATURDAY, AUGUST 6, 1842.

Omnia despera prudenter, et omnia spera Fortiter: ut caveas omnia, nil metuas.

As we prophesied in February, the parliamentary session has passed, and nothing has been done for Medical Reform. Thank God it is no worse. If the Corporators had been as wise and well disciplined as we have been inert and powerless, they would by this time have taken the benefit of an act, which, whitewashing them of all their past liabilities to the profession, would have given them a fetterless scope for the exercise—under some new *alias*—of their old ingenuity in the manufacture of false notes of hand, and the management of the whole complicated machinery of obtaining money under false pretences. The people are not wholly to be despaired of, who for every fault of theirs can thus point to one as great in their enemies. The only thing to be

feared, is that the latter may unexpectedly resolve to learn something from experience: for however pleasant the safety we owe to other's blunders, it is unfortunately as uncertain and deceptive as it is discreditable.

The feeling is universal, that we are on the eve of some break up of the profession, to be attended by some attempt at its remodeling. The beauty and order written in that book of every man—NATURE—the gradations and mutual dependence perceptible in our social arrangements, the regularity and system exhibited by the Bar, the Church, and the State, the plan, the adaptation, the harmonious working, obvious in all our scientific or civic institutions, all these are standing protests to every man in society against the motley compound of bigotry, prejudice, ignorance, disorganisation, and frightful anarchy, which form in the 19th century the essence and leading characteristic of what is sometimes called by almost a sublimity of irony—BRITISH MEDICAL GOVERNMENT. The melancholy anomaly is present to every medical man; foreigners tell him of it with a shrug of mingled pity and wonder—he finds it in his journalist's pages, his friend's letters, his neighbour's conversation, *his own practice*: it weighs on him like a nightmare; yet what, we ask in mournful soberness and solemnity—what is there in any part of our profession to give us hope that we shall precipitate the change that obviously impends, or give it any portion of its shaping, colouring, or proportions when it comes? The present system has received its death summons; public opinion has sentenced it in plainest language; its stark-staring anomalousness and huge deformity made a metamorphosis of some kind inevitable the moment people had leisure to think on them free of passion—but what is there, again we ask, in the present attitude of the profession that guarantees us that the abhorred system shall not, under parliamentary legerdemain, be transmuted without undergoing a change, disappear but to present us its former self—its essential noxious parts, all complete under the disguise of a novel dress?

In Parliament the tower of all reasonable hope, the beginning and end of all sane confidence for medical men, we have no one head, no one voice! Mr. Warburton, whose brow so often wrinkled, and hand, nay tongue, so often moved in our service, seems promised a long enjoyment of the Chiltern Hundreds. Mr. Hawes labours under an acute and grievous remembrance of the trituration he received at the hands of the chemists and druggists, alias the pharmacutists; and as for Mr. Wakley, the coroner, and—but we remember: the honourable member's condition puts truth and therefore us for a time under silence. Sir James Graham, it is true, has also talked on the subject, and has threatened to turn lawgiver; his notion, however, of renewing the charters explains what he promises, and teaches us that the

measure of our hope in him should be in the inverse ratio of the confidence of the Corporators, which at one time at least was unbounded. In the very place, then, where the battle is to be fought and won, and the fate of the profession decided for another century we have not one staunch defender, one true representative—one single individual, with at once the knowledge, the will, and the power to ward from us injuries, and assert for us rights. Yet we talk and write, and our societies meet and discuss, as if our views of Medical Reform—the views of the Profession—were a thing of probable, certain, nay, near realization! We have heard of mesmerists who declare they have had their volitions understood, yielded to and obeyed by parties separated from them by stone walls and huge distances; but here there was some occult sympathy introduced to account for the marvel: but on what agency—less than diabolical—the Profession can so confidently rely for making its wishes understood, its volitions triumphantly carried out, by members of Parliament, who neither know the one nor care for the other, is what vastly surpasses the powers of our poor understanding to conceive.

As the great defect, however, is plainly notorious, so is the remedy. The truth is clear. We must look among our own brethren for our saviours. Shall it be said that we have no man among us capable of Parliamentary duties? If there be, is there no place in this wide empire where medical men would unite, and assisted by other medical men in other parts of the country, be enabled to present him to the electors in an aspect which would ensure his return? The Church has its bishops, besides such unordained clerics as Sir Robert Inglis, Mr. Plumptre, &c.; the Army has its Hardinges, its Somersets; the Navy its Napiers, its Pechells; the Bar its Follerts, its Wildes, and each a large host more; but where are the men whom *Medicine* claims? Alas! in the great council of the nation, the place of honour and crowning distinction for men who have done, or are expected to do their fellow-citizens service, *there* Medical Science and the Medical Profession, with all their vast and vital complications of interests, stand without a champion, without a representative! And why? Are we less respectable? Our position is no less than theirs, that of gentlemen. Are we less learned? The whole of our lives is but a continuous system of education. Are we of less concern to the country? Its most important interests, the health, the lives of its people, are in our hands. There is then grievous fault somewhere, and no small portion of it lies at the door of the Profession. There is no want of reasons for medical members, no want of medical candidates duly qualified, the want is mutual understanding, kindly union, a little zeal, and some energy in the Profession. We want an aggregation in pub-

lic of that disinterested charity and forgetfulness of self each individual member of our body is daily showing in private. What is wanted is a true sense of the state of things, and a general and kindly anxiety to adjust them. With a zealous body of medical supporters, why might not Sir James Clark, why might not Mr. Arnott find their way into the House! When we shall see a commencing effort to have two such men explaining what we want, in a place that much needs such explanation, we shall see some chance of a sound effective remodelling of the Profession; but so long as we content ourselves with nameless deputations which never get a hearing, reports which never get a publication, and petitions which from their violent attacks on the skull of Priscian, are conceived by members to have no meaning save a professional prayer for a portion of the Educational Grant, so long shall we despair of any substantial improvement, and so long shall we utter prayers for the postponement of a change, which, come when it may, can never come at a worse time than when the Profession, thrown off its guard by the pretended defence offered by such mock demonstrations of impotent activity, must be compelled to receive terms completely at the mercy of its opponents.

WE must content ourselves this week with publishing a petition that has been drawn up against the Portugal Street Burial-ground, and the other similar nuisances infesting the neighbourhood peculiarly selected by the managers of King's College for their hospital. A copy of the petition lies at our office for signature.

To the Honourable the Commons of the United Kingdom of Great Britain and Ireland in Parliament assembled,

The humble Petition of the undersigned resident Householders of Drury Lane, Clare Market, the Strand, and adjoining districts,

SHEWETH,—

That your Petitioners have for years past had just cause for complaint arising not only from the number, but the shamefully overcharged state of the Grave-yards in this district.

That your Petitioners, feeling a deep and powerful conviction, forced upon them by a long and painful experience of the numerous evils consequent upon, and inseparable from, a state of things at once destructive to health, degrading to religion, and shocking to humanity, do humbly and earnestly implore your Honourable House to interpose your authority, in such manner, that at the earliest possible period the entire abolition of the present system of interment may be effected.

That your petitioners desire to express their unfeigned satisfaction and gratitude that this widely spread grievance has been the subject of a long, searching, impartial, and patient inquiry of a Committee of your Honourable House.

From the evidence investigated with reference to the awful abominations existing, and necessarily arising out of the present system, your Petitioners venture to express a hope, that the labours of your Committee will cause the immediate introduction of such alterations in the present system of interment as your Honourable House in its wisdom may deem necessary, and your Petitioners will ever pray, &c.

EXTRACTS FROM FOREIGN JOURNALS.

(For the 'Medical Times'.)

FRENCH.

Remarks on the Nature and Treatment of Erysipelas. By M. Velpeau.—The predisposing cause of erysipelas consists more frequently, according to this eminent surgeon, in certain external influences, as atmospheric changes, &c., than in the general health or constitution of the patient. 2. An occasional cause is frequently found to be a wound, or some point of irritation upon the surface of the integuments. 3. The direct or exciting cause is in general a matter coming from without, or from the diseased tissues, and which becomes intermixed with the fluids of the part. 4. The fluids thus altered produce two orders of morbid phenomena—the general and the local: the general symptoms appearing before the local, when the passage of the fluids into the general current of the circulation is uninterrupted in the first instance; whereas the local phenomena precede the general, where the disease takes place by imbibition only. 5. In the inflamed skin the diseased fluids seem to circulate simply by *endosmosis*, so that in its progression, erysipelas spreads along the skin like oil thrown on a level surface. 7. A great proportion of the morbid matter remains till the end, beneath the epidermis or in the cutaneous tissue, mixed with the blood in the inflamed part. A complete attack of erysipelas is almost always formed of various successive affections. 9. Erysipelas, when confined to a small surface, in general, declines of itself after four, six, or eight days. 10. The duration of the entire affection is thus very variable, on account of the number of erysipelatous attacks, one succeeding or being superadded to another. 11. The remedies, whether internal or external, capable of removing an affection of this nature, must be such as tend especially to modify the blood. M. Velpeau then declares, that having frequently failed with the usual remedies employed against this malady, such as compression, the flying blister, nitrate of silver drawn across, or around the inflamed surface, white precipitate ointment, the various acids, &c., a new idea suggested itself to him, from a consideration of the modifications induced in the blood by the preparations of iron. He was thence led to employ as a local application a solution of the sulphate of iron, in the proportion of one ounce to a pint of water, or an ointment containing two drachms to an ounce of lard. The ointment he considers a more convenient application for the head, neck, and trunk. Great care is, however, requisite in thoroughly powdering the salt before mixing it with the lard. It should then be rubbed freely over the whole inflamed surface, and even a little beyond. The solution is employed by means of compresses, wetted every six hours, and maintained on the part by means of a bandage. The skin must be kept constantly moist. One of the inconveniences of the sulphate of iron, is that of reddening the linen with which it comes in contact. No means of neutralising this effect has been as yet discovered. M. Velpeau states that in twenty-four

cases in which he employed this application, the most marked and rapid influence was exerted over the progress of the eruption. In no instance did the same spot of inflammation resist this means more than twenty-four or forty-eight hours. A singular fact, however, was, that erratic erysipelas, when overcome in one part, was not prevented showing itself in other regions already smeared with this application. This would seem to indicate that this remedy, like so many others, is simply curative and not preservative. There is only one point more to which we shall refer, and that is, whether if, as M. Velpeau states, the sulphate of iron succeeds in these cases from its action on the blood, it would not be better to administer it at once internally? This would seem to be but a necessary conclusion from M. Velpeau's own words: "*The fluids of the diseased region (the alteration of which is the direct cause of the erysipelas) produce symptoms of a general character, when they pass into the current of the circulation.*" The authority of M. Velpeau is, however, a sufficient recommendation for the extended trial of this preparation in the treatment of erysipelas.

Statistical Remarks on Strangulated Hernia, and the Operation for its cure. By M. Malgaigne.—M. Malgaigne divides his eminently useful remarks (which comprise the cases of hernia observed in the Parisian hospitals between the 1st of January, 1836, and the 31st of December, 1840) under the following heads:—

1. *Influence of Seasons.*—If we divide the year into three periods, the first containing the months of December, January, February, and March; the second, April, May, June, and July; and the third, August, September, October, and November; we shall find the number of strangulated hernias as 99 in the first period; 66 in the second; and 55 in the third. Comparing the six months of winter to those of summer, we have 137 cases to 83. This great difference, then, leaves no doubt as to the influence of the season in the production of this disease. 2. *Influence of Sex.*—Of 220 cases of strangulated hernia, 120 were in females, and 100 in males. This disproportion is greatly augmented when we remember that hernias are in general four times more common in men, so that the proportion of strangulated hernias would be as 5 in the female to 1 in the male. 3. *Influence of Age.*—The following are the results at which he has arrived on this head:—From 2 to 20 years of age, 5 cases; 20 to 40 years, 52 cases; 40 to 80 years, 163 cases. 4. *Combined Influence of Sex and Age.*—M. Malgaigne has ascertained from his calculations, that up to 30 years of age, the predisposition of the two sexes to strangulated hernia is almost equal; that in the male, this predisposition slightly diminishes up to 40, still more from 40 to 50, and so on, beyond this age, while in the female from 30 to 40 years of age, the predisposition is more than doubled; beyond 40 it doubles again, and after 50 it is so frequent, that old women with rupture are five times more exposed to strangulation than young women, and six or seven times more than old men. M. Malgaigne attributes this fact to the greater liability of females to femoral hernia, a species which is well known to be most subject to strangulation. 5. *Mortality as to the Number of Operations and the Number of Ruptures.*—Of 220 persons operated on for strangulated hernia during the five years, 133 died. In comparing this number with that of the ruptured paupers in Paris, M. Malgaigne found that out of about 350 cases of hernia among the lower orders, one came annually to be operated on for strangulated hernia; and from about 570 cases, one was annually devoted to die from this operation. 6. *Mortality as to the Seasons.*—On dividing

the year into two periods of six months each, the cold season gave 77 deaths to 39 cures, and the hot season 56 to 38. If we comprise in the winter the four months, December, January, February, and March, we have 63 deaths to 36 cures; the proportion for the other two periods of four months each will be 38 to 28, and 32 to 23. 7. *Mortality as to the Sex.*—In the male we find 62 deaths to 38 cures; in the female, 71 to 49. Thus, in reality, women bear the operation better than men. The reason of this circumstance is the greater mortality of the operation in early age; and, as I have already said, we then find the greater part of those operated on belonging to the male sex. 8. *Mortality according to the Age.*—Below 25 years we find the following proportion: *Males*, 18 operated on, 14 deaths, 4 cures; *females*, 3 operated on, 1 death, 2 cures. Above 25 years, *males*, 82 operated on, 48 deaths, 34 cures; *females*, 117 operated on, 70 deaths, 47 cures. Hence we may conclude, that the gravity of the operation, enormous before 20 years of age, and even to 25, diminishes from 25 to 40, so that we then save more than half of the patients: it scarcely increases from 40 to 50 years of age; but from this latter period, it again becomes so great, that in old men we lose more than two-thirds of those operated on. 9. *Mortality considered in Reference to the Period when Death took place, counting from the Day of the Operation.*—In 69 males and 72 females, there were on the first day, 10 deaths; the second day, 23; the third day, 22; the fourth day, 20; the fifth day, 17. Total, for the five days, 92 deaths, or 70.23 in 100. On the following days, the mortality was much less; from the fifth to the ninth day it was 22, or 16.79 in 100; and from the ninth to the thirty-eighth day it was 17, or 12.97 in 100.

ACADEMY OF SCIENCES.

Formation of the Membrana Decidua.—M. Coste read a Memoir on the above subject. The following are his conclusions:—1. The deciduous membrane does not always form a bag closed on all sides, since in the human species, for instance, it presents two openings for the Fallopian tubes, and a third at the os uteri. 2. This membrane is not only placed in juxta-position with the internal surface of the uterine parietes, but it adheres, at this period, with such perfect continuity of surface, that it is impossible to distinguish the limits of the uterine mucous membrane; so that these parts seem to be confounded together, and to form but one tissue. 3. Instead of being a non-organized layer, the deciduous membrane, on the contrary, is supplied with vessels of such a size, that it can be compared only to a kind of spleen or thyroid body, spread out into a membranous shape, and covering the ovum as with a layer of blood. M. Coste proposes shortly to treat of the manner in which the maternal blood arrives at the placenta, and of the part which the deciduous membrane takes in the formation of the latter.

MESENTERIC DISEASE, RICKETS, &c.

By J. NOTTINGHAM, Esq., Surgeon, Liverpool.

WITHIN the last few weeks, five or six cases of disease of the bony frame-work of the body have come under my notice; such, indeed, as generally receive the name of Rickets; not well applied, however, to many of these cases where the spinal column is not affected, and where the malady has attacked more especially the bones of the head or of the extremities.

The lower extremities are often the first to declare the existence of some constitutional

defect, by the deformity which takes place about the ankles, when children have just begun to walk without help, and I have several times had children brought to me under such circumstances, by parents who had heard of operations being performed for the cure of club-foot, and who hoped in this manner to have the deformity remedied.

The ravages of the rickets in large, and especially in manufacturing towns, are such as to render it an object of the greatest interest, not only to the medical practitioner, but to the zealous and practical philanthropist.—In cases where life is not destroyed, the deformity of the back and extremities is often of the most appalling aspect, while the distortion of the pelvis, which so often takes place in females, in connexion with curvature of the spine, and which in after life may impede labour, prevent delivery, oblige the obstetric practitioner to have recourse to craniotomy, or even to the Cæsarian operation, are sufficient to attract to this form of disease a degree of attention which every malady does not demand.

Children born of scrofulous parents, or those who have a great development of the nervous system, have appeared to me especially liable to this form of disease; however, it is evidently not confined to them, for others of lax fibre and weak frame are attacked by it, although scrofulous disease, or the nervous temperament, may not be observed in connexion with it.

The nutritive function appears to be greatly at fault in most cases of this complaint; for without paying especial attention to the peculiarities in the secretion of the kidneys, or of the intestinal canal, we may often observe that there is co-existent disease of the mesenteric glands; and which, if the practitioner have had an opportunity of watching the progress of the health or condition of the child, will often be found to have preceded the disease in the bones. Hence the necessity of directing our first attention to the secreting and absorbing surfaces, and glandular organs—such as the lining membrane of the intestinal canal, and the skin, which are evidently of the first importance, the liver and the kidneys coming next in order. The latter organs, however, appeared to be affected only in a secondary manner; for, although the salts of lime, which ought to be deposited in the bones for hardening their structure, and ministering to their due organization, appear to pass off in some degree with the urine, the remedy for such a state of things is evidently to be sought in means which will influence the sanguification of the system, and not directly, but through the medium of the changed blood, can we expect to alter much the action and secretion of the kidneys.

My reasons for troubling the pages of the *Medical Times* with this communication are twofold; first, strongly to recommend hygienic means of treatment, joined to an especial attention to the state of the abdominal organs and skin, which will constitute the main part of the medical treatment; and, in the second place, I just wish to ask, whether that practice of applying moxas and other irritants to commencing curvatures of the spine—sometimes in two, three, four, or half-a-dozen places—is not worse than useless? I have often seen the results of such treatment, but have never known it to do any good; nor could we *a priori* suppose that a state of disease of the nutritive function, which may tell upon the head, upon the spine, upon the bones of the extremities, or upon the glands of the mesentery, without affecting the bones, is at all likely to be alleviated by the application of issues to the back, or the employment, indeed, of external irritants anywhere.

A child, fifteen months old, was lately brought to me with an aspect of countenance and body,

which, coupled with the history of the case, suggested to me at once the idea that mesenteric disease was present, an opinion which more careful examination established. In this case, as in some others, I have noticed a considerable enlargement of the inguinal glands, which has occasionally been the source of the first suspicion respecting mesenteric disease. I have not so often met with corresponding enlargements of the glands in the armpit or neck. But in all these cases, it is easy to see how widely the influence of the malady is spread through the frame; and looking at it in this manner, especially with regard to the function of nutrition, we at once understand the manner in which the organs of locomotion, bones and muscles, must be implicated; for a want of due nutrition will deprive the former of their solidity and resistance, while the latter will be robbed of their tone: thus will the bones, especially such as might be called perpendicular supports, bend under their superincumbent weight, and that the more readily, as the muscles have not their normal power, and cannot afford that steady support or bracing influence, which, under other circumstances, they give to the more passive organs of locomotion. In the case of the child above mentioned, considerable improvement took place during the administration of small doses of quinine, the employment of the cold bath, and of friction on the surface of the body, with the occasional use of a small dose of castor oil; the favourable change is still progressive, and we hope for a restoration of health.

In this child the appetite was always great, even when emaciation went on most rapidly, indicating apparently the defect which existed in the action of the digestive organs, of which, perhaps, the stomach did not partake.

It would be interesting to isolate, if this could be done, that division of the nutritive function to be sought for between the stomach and the thoracic duct, which is more especially concerned in this disease; for in this way we might hope to find an answer to the question—mid the mucous lining of the intestine, the lacteal vessels, and the mesenteric glands, where is the centre of irritation? or do all these parts equally partake of the disturbance which it is our object to investigate; for such considerations lead to a more scientific choice of remedies, mercury, iodine, and other agents being employed, so as to suit the peculiarity of prominent indications.

The first of the two medicines just mentioned will often be of use in altering the condition of the biliary apparatus, and improving the secretion from the lining of the small intestines, while iodine is occasionally employed with advantage in scrofulous constitutions, and in cases where a languid state of the absorbent system appears to prevail.

I have at present under my care a child of six years of age, with mesenteric disease, and curvature of the dorsal spine; of which complaints the first here mentioned was no doubt the first in order of occurrence. Issues have been applied at the sides of the curvature by a continental practitioner. The belly is large and prominent, but the general health as yet not much impaired; the circulation is somewhat feeble.

In this case we recommend the immediate healing up of the issues; that salt-water bathing may afterwards be resorted to.

The internal treatment is commenced by giving small doses of quinine, with directions for the occasional employment of a gentle laxative.

It appears to me that if counter-irritation is called for in these cases, the right way of employing it is upon the general surface of the

body, in the shape of friction, with rough flannels, or other means calculated to rouse the capillary circulation on an extensive surface.

Generous diet, and especially a tolerable allowance of animal food, without exciting wines, or heating condiments, are to be recommended. Rest on a sofa, or inclined plane, to alternate with walking, and other exercise, which cannot materially disturb the vertebral column. Mechanical supports to be avoided at present; and the muscular system of the back and upper extremities trained to an increase of power, thus hoping to give greater firmness to the spine and the muscular structure attached to it.

MEDICAL REFORM.

Memorandum of a Plan for Establishing One Examining Board in Scotland for Licensing General Practitioners in Medicine and Surgery, composed out of all the existing Examining Bodies in that part of the United Kingdom, with Suggestions for the improved Regulation of Medical Degrees. By a Professor in Marischal College and University of Aberdeen.

At present there is no such Board for all Scotland; but, in the seat of the university of Edinburgh, the Royal College of Surgeons possesses the power of granting licences to general practitioners throughout eight counties, having a population of about five hundred thousand, and in the seat of the university of Glasgow, the faculty of physicians and surgeons possesses a similar power of licensing throughout four counties, having a population of about eight hundred thousand. That college in Edinburgh and that faculty in Glasgow possess each the power of excluding from general practice even the graduates of the university within its own district, notwithstanding that the university examines in the very same branches as the provincial corporation.

While the college of surgeons in Edinburgh and the faculty of physicians and surgeons in Glasgow thus possess exclusive jurisdiction in twelve counties with a population of thirteen hundred thousand, the remaining twenty-two counties of Scotland, which likewise have a population of thirteen hundred thousand, are exempted from the control or the jurisdiction of any medical or surgical corporation whatsoever.

It is in this exempted part of Scotland, in the most populous county, in the largest town, and at a distance of seventy miles from the nearest point within the province of either licensing corporation, and of more than one hundred and twenty miles from the seat of the university either of Edinburgh or of Glasgow, that Marischal College and University of Aberdeen teaches its medical school, in the vicinity of an extensive and excellent hospital, and exercises its university privileges; and although that university neither possesses nor wishes to possess any exclusive powers, its graduates are accepted by the public, in the seat of the university and in all the extensive districts around, on the recommendation of the university's diploma, unrestrained by any provincial corporation, such as those that have, for centuries, had the power to restrict the universities of Edinburgh and Glasgow, even in those large towns which are the seats of the universities, as well as in the surrounding populous districts. Under such circumstances, Marischal College and University of Aberdeen is more liable to be injured in its medical school, and in its position and weight as a university in the important district to which it belongs, by any new adjustment of university privileges, or extension of the powers of licensing bodies, than either of the other universities, which like it have a medical faculty, not in nominal existence merely, but in active operation.

This explanation is rendered necessary in consequence of the university, in conjunction with college of physicians and the college of surgeons in Edinburgh, having endeavoured to obtain, and having invited the co-operation of the university of Glasgow in order to obtain, through the government, a great enlargement of all their own powers and privileges, together with a suppression of the existing licensing body in Glasgow, and a rendering nugatory the statutory *equal powers and privileges* of Marischal College and University of Aberdeen, solemnly guaranteed, though these be by the last Acts, of the English and Scotch Parliaments; notwithstanding that the university, whose competition would thus come to be suppressed, has never made the slightest effort to injure them, and although during the whole incumbency of its present members, it need not shrink from comparison with any of the aggressive bodies, for the zeal it has manifested, in its own sphere, to maintain a high standard of medical education.

The writer, however, cannot persuade himself that the treaty of union is held in so light respect as to make an unjust and unnecessary violation of it, by the legislature, possible; nor, in proceeding to show how one board for examining general medical practitioners in Scotland may be composed out of all the existing examining authorities in that part of the United Kingdom, will he imitate the parties referred to by suggesting that either of the provincial examining bodies be suppressed, or that any one university in Scotland should be treated according to a different rule from another; all which, he hopes to show, may be effected well, while the public interest in obtaining properly qualified medical and surgical practitioners will not only not be sacrificed in any degree, but the better secured, than it would be under the insidious and unconstitutional proposal that has emanated from the university and the medical and surgical colleges of Edinburgh.

The Writer assumes—what he believes will be the impression of most persons of experience in the business of teaching and of examination—that the minimum standard of attainment exacted by a board whose examination is rendered imperative, either by legislative enactments, or by the conventions of society, must be comparatively low—or at least so low, as to afford ample scope for the better qualified and the aspiring among those that enter the profession, to pass a higher standard of examination.

It is thus conceived—and the conception accords with what in Scotland has long been the established notion with regard to professional education—that there is room in the profession for two educational testimonials—the ordinary licence, and a university degree.

It is respectfully suggested that the taking out the licence should be made imperative on every practitioner in medicine or surgery, in order to entitle him to legal recognition as such in any part of the United Kingdom, while the taking a university degree should be voluntary, and that every reasonable and practicable precaution should be adopted to insure that the university degree shall never come to be lowered to the standard of the mere licence. Nobody that knows the practical working of the Scotch universities, and is aware of the weaknesses as well as the excellences of their system, will believe that strong precautions for this purpose are superfluous. One precaution that would obviously insure against the possibility of the university degree sinking, in any case, below the level of the mere licence, as well as against probable collision between the licensing board and the universities, would be, to make it imperative that no candidate for a medical degree in a university should be admitted to his final exa-

mination, until after he had passed the examinations for licence before the general board. No doubt, this would be a great concession by the existing universities of Scotland—far too great to be readily acceded to, or equitably enforced, without their being compensated, in some of the other arrangements, for the new restriction they would thus come under. Now, it is humbly submitted that, while additional weight and efficiency would be given to the examining board for the licence, the universities could be compensated for the sacrifice now suggested, by their being admitted, under the following scheme, to have a share in conducting the examinations of the licentiates.

All pretension to having bestowed a mature consideration on minute details is disclaimed, in presenting the following outline in order to make intelligible the proposed scheme.

Supposing the number of departments of examination of the candidate for licence (such as anatomy, chemistry, &c.) to be eight—then eight examiners may be appointed by the several universities in rotation, and also other eight examiners by the existing provincial examining bodies—the College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons in Glasgow. There would thus be two examiners in each department, as two examiners in anatomy, two in chemistry, and so forth. In regard to the universities, the routine of appointment might be arranged very simply. The nomination of the university examiners might come about annually, so that, in such a department as chemistry, where each of the five universities has a professor, the turn of appointing the examiner would come to each university only once in five years; whereas in such a branch as midwifery, wherein only the two universities of Edinburgh and Glasgow possess each a professor, the turn of appointing the examiner would come to each of those universities once every alternate year, and not at all to any of the three other universities. Thus the share of each university in the examination would be proportioned to the extent of the establishment of its teaching professors.* The board might hold its examinations in the place or places deemed most expedient.

One good consequence might be expected from thus incorporating the medical professors of the universities into the examining board—inasmuch as the college of surgeons of Edinburgh and the faculty of physicians and surgeons of Glasgow, would, in support of their own influence, probably be led to appoint examiners of higher qualifications than it might otherwise occur to them to be necessary.

Besides requiring that every candidate for a university degree should, before being admitted to his final examination, have obtained his licence, it is recommended that the minimum age of the graduate should be fixed, authoritatively, to be at least one year more than the minimum age of the licentiate.

It will readily be perceived that, under the proposed arrangement, the necessity of placing the Scotch universities under the control of a council of health for the United Kingdom, which is understood to be intended for the regulation of licences to practise, would be diminished, if not indeed altogether superseded.

The author of these suggestions, believing that such control might be pernicious, and would be disagreeable to the universities in Scotland,

* Marischal College and University, having professors in four departments, such as could not be omitted in the examination for licence, namely, medicine, surgery, anatomy, chemistry, would, under the proposed arrangement, have only seven appointments of an annual examiner during the course of six years.

as possibly it might be to universities elsewhere, and, aware that such control would not be according to their ancient constitution, would humbly beg leave to suggest, that no control by such a council over the universities should be attempted to be instituted by legislation, so as unnecessarily to provoke opposition; and, indeed, so far as regards the regulation of medical degrees conferred by universities in Scotland, he would humbly, but earnestly recommend, not that they should be left free from proper control, but that no legislative measure whatever be attempted for that purpose, conceiving, as he does, that the prerogatives of the crown, consistently with the constitution of the Scotch universities, afford ample means of effecting all the good that may be desired, so as to bring those universities, as regards their function of conferring medical degrees, up to the state required by the prevailing notions of the intelligent members of the profession in the present day. The Scotch universities are, by their constitution, sufficiently under the control of the crown, to make easy the obtaining from them periodical reports of their procedure in regard to their medical degrees, by the secretary of state, who has it in his power to appoint a commission of visitors, in order to frame rules for the observance of all the universities.

As the medical classes in the colleges of the universities in Scotland contain by far the majority of medical students in that part of the United Kingdom, and as those classes cannot fail to be affected by the rules made upon the recommendation of the council of health, it seems to be nothing more than fair, that in the interval between a recommendation by the council, and a regulation being authorised by the secretary of state, such proposals by the council as may affect the medical classes of the universities should be communicated to the universities, in order to afford them an opportunity of stating objections or offering suggestions for the consideration of the responsible minister.

Supposing that, for the purpose of insuring more stability of arrangement, legislation be adventured upon at all, in regard to the Scotch universities, the following might be the provisions:—

I. That a bachelor be not less than twenty-two years of age, nor a doctor less than twenty-five.

II. That no candidate for a medical degree be admitted for examination in any of the Scotch universities, unless he have previously attended, for an academical year, the medical classes of the university in one of its colleges, or have obtained a degree in arts in the same university, in consequence of residence and examination, nor be admitted to his final medical examination unless he have previously passed his examination for licence before the general board.

The second provision would satisfactorily guard against one great practical evil that has occasioned much scandal to the Scotch universities at large, inasmuch as it would confine the smaller of them to a quite unobjectionable description of graduates. The restriction would be quite consistent with the original constitution of the Scotch universities; according to which, they are teaching and graduating bodies, and not graduating bodies apart from their function of teaching. Any hardship that formerly might have been felt by individuals, and from England especially, if such residence had been required by all the Scotch universities, cannot now be a just ground of complaint, after the institution of the University of London.

The deficiency of attainments of the medical graduates of the Scotch universities, in preliminary literary and scientific education, is a

defect which a prudent exercise of the constitutional authority of the crown could most easily remedy, but which, the writer has learned with surprise, the university of Edinburgh has urged the government to perpetuate. That university, indeed, has been so far sensible of the inconvenience of having two examining bodies for granting licences in Scotland, as to agree to the suppression of the Glasgow one, and to suggest the maintaining and extending the powers of the Edinburgh one, while it has proposed as part of the new system for the improvement of medical graduation, that *the university of Edinburgh, together with that of Glasgow should be singled out from all the universities of Scotland, and, as far as appears, from all the universities of the United Kingdom, to have each the power of granting the degree of bachelor, WITHOUT THE CANDIDATE HAVING TO UNDERGO ANY EXAMINATION BY THE GENERAL BOARD, IN ORDER TO BE LEGALLY RECOGNISED THROUGHOUT THE UNITED KINGDOM, but on the remarkable stipulation, that this degree is to be granted by those two favoured universities, on precisely the same amount of preliminary education as the licensing board is to require of the general practitioner.* That a university should propose the enlargement of its own privileges, under such conditions as to render nugatory the privileges of other universities, and, in consideration of its being thus favoured, instead of offering securities to the public for its graduates possessing a general education of a superior order to what is to be required of the ordinary licentiate, should expressly stipulate that it be freed from all such obligation—may be consistent, but cannot be creditable. On the part of the university to which the writer has the honour to belong, he would protest against all such proposals. The necessity of restraining the universities of Scotland from unworthy competition in lowering the standard of preliminary education, which no single university is able of itself to restrain, has been felt nowhere more than in Marischal College and University of Aberdeen. That university, in the year 1826, required that no candidate should be admitted to examination for a medical degree, unless he held a degree in arts; and, having allowed reasonable time to elapse for intimation before enforcing the rule, the university did not alter the regulation till the end of fourteen years, when it was compelled to abandon it, finding itself unable to maintain the regulations single handed, and did experience the mortification of being obliged to adopt too low a standard of attainment in preliminary education, although, in fixing on the new standard, the university still went somewhat above what is demanded in any of the other universities in Scotland, as well as up to the standard that was required by the London University until the present year, and in addition thereto, included some knowledge of general physical science, in a manner similar to what had been enacted in the rules of licence by the college of physicians in London. Conscious of the deficiency in the new standard of preliminary education, the university endeavoured to compensate in some degree for the defect, by extending the length of the professional examinations in a measure then and still unknown in the conferring of medical degrees in the other universities of Scotland.

Such of the changes in the regulation of medical degrees in the Scotch universities as have been here distinguished as fit for legislative enactments, if thought necessary, which, on the part of the crown, is entirely a question of discretion (for its own powers are fully adequate to make these and other desirable changes,) could not be opposed on equitable or constitu-

tional grounds by any university in Scotland for all then would be treated alike; whereas were an addition of privileges conferred on some, and an abridgement of privileges inflicted on others, there would be a repeal of the ancient Acts of the Scotch Parliament which jealously provide that the privileges of the Scotch universities should remain *alike in all*, and there would be a violation of the act of union, so far as that act provides that the privileges shall be preserved while the union endures.

REVIEWS.

The Simple Treatment of Disease, deduced from the Methods of Expectancy and Revulsion. By JAMES M. GULLY, M.D. Fellow of the Royal Medical and Chirurgical Society, &c., &c. London, 1842.

First Notice.

THIS is a small but interesting volume on the general treatment of disease. In the introduction to the work a naked sketch is given of the various medical doctrines that have obtained since the time of Hippocrates. Our author then enters upon the *expectant* treatment of disease. This mode of treatment does not consist in doing nothing, but in watching the operations of nature in her curative efforts, and in cautiously assisting those efforts; sometimes by anticipating the salutary results, but more frequently by following in the track she indicates during the progress of any malady. This practice eschews all violent remedies, and looks chiefly, if not exclusively, to nature for the cure. In the treatment of fever, for example, the cure is effected, not by the physician, but by nature. The physician can effect his purpose only by placing the patient in the most favorable circumstances for allowing nature to effect the cure. He withdraws the patient as far as he can from the influence of deleterious agencies; he watches the critical movements of the system, and he tries to assist nature in effecting those crises which she herself indicates; but he can do no more. So in fracture of a bone, the surgeon does not effect the re-union of the osseous pieces; he only places the patient under such circumstances, that when the union is effected, the result may be the most favorable to the patient. Although the predominant influence of nature in effecting the cure of disease has been long acknowledged by the most eminent physicians, yet the great mass of practitioners, even of the present day, are influenced by different views, if not by different principles. The practitioner must do *something*, and whatever that something may be, it gets the credit of curing the malady. The "active" treatment is distinguished from the *expectant* by the use of the revulsive; and our author devotes a chapter to the exposition of this principle of treatment. The revulsive treatment consists in *thwarting* the natural progress of disease, and forcing nature into the track which art shall dictate. It leaves nothing to the powers of the economy; it trusts entirely to the efficacy of remedial agents, and it supposes the natural tendency of all diseases to be towards the extinction of the individual. The principal revulsive agents are blood-letting, blistering, purging, vomiting, sweating, the induction of diuresis, &c. Our author does not exclusively recommend either the expectant or revulsive system of treatment; he recommends a judicious mixture of both, a plan which he denominates "simple treatment," in which extremes of treatment are avoided, and in which, although he confides in the curative powers of the system, he does not foolishly refuse to apply those remedies which experience and observation have proved efficacious. T

actice recommended is judicious, but not new; is the one, we are inclined to think, which is followed by all the best practitioners on the continent, as well as in this country. At the same time we would recommend the perusal of the work to all those who have an inordinate faith in the efficacy of medicine, or who have not directed their attention to the degree in which the *medicatrix nature* contributes to the cure.

Deformities of the Spine and Chest, successfully treated by Exercise alone, and without Extension, Pressure, or Division of Muscles. By CHAS. H. ROGERS HARRISON, M.R.C.S., Honorary Secretary to the British Medical Association, &c., &c., &c.

THIS is an attempt to show the superiority of exercise over every other plan of treatment in the cure of spinal and thoracic deformities. The book is evidently the production of an intelligent young man, who has had little or no experience in the treatment of such deformities, but who demonstrates to the world, that he is willing and perhaps qualified to treat such cases. The public would give him the opportunity. We entirely agree with our author on the importance of exercise as a means of developing the physical powers of the young system—of preventing deformities, and, to a certain extent, correcting even the deformities that may exist; indeed, this is now so well known and appreciated, that gymnastics and calisthenics constitute a very important feature in our modern system of education; still our author, though he has adduced nothing new either in theory or practice, has the merit of having placed the subject in a clear and simple light before the public, and notwithstanding the book has been written rather for the public than the profession, the professional man may peruse the volume with pleasure and advantage.

Our author divides his subject into four parts. In the first he treats of the normal structure of the spine and thorax, and by means of a few neatly-executed figures has been enabled, in a short space, to impart a correct descriptive outline of the osseous, ligamentous, and muscular structures implicated in spinal deformities; in the second part he treats of the kinds and causes of spinal deviations; in the third, the treatment of these deviations; and the fourth or last part devoted to the examination of deformities of the ribs and sternum. The figures illustrative of the different kinds of curvature are numerous; and to render his descriptions of the treatment more intelligible, our author has given delineations of the attitudes and exercises to which the patients should be subjected.

In simple deviations of normal form either of the spine or thorax, we have no doubt the agency recommended will be found highly beneficial; but in serious deformities, particularly that described by Pott, though not referred to by our author, such exercises are entirely contra-indicated. But for certain curvatures in which there is no lesion of the affected textures, and which arise from muscular debility, the gymnastic plan of treatment is both philosophic and effective; and if the work before us tend to the more frequent introduction of this remedial plan in such deviations, it will not have been written in vain.

Observations on the Preservation of Health. By JOHN HARRISON CURTIS, Esq. Fourth edition, 1842. Churchill.

THE new matter which has been interpolated into this edition of the 'Preservation of Health' is so much enlarged and improved it, as almost to constitute it a new book. The work has apparently been subjected to a careful revision; and chapters upon subjects not previously touched upon, but still of manifest

importance, have been introduced, while those that were previously noticed have been in some cases rewritten, in others, to say the least, much improved.

The general rules for attaining a good old age by general temperance, and by especial attention to preserve the *mens sana in corpore sano*, and the hygienic measures necessary to be adopted for the preservation of large cities in the most healthy conditions, and for improving the comforts and adding to the convenience of the inhabitants, having been taken into consideration in the previous editions, we shall pass over cursorily, contenting ourselves with observing that Mr. Curtis lays great stress upon the providing a full and healthy supply of pure water, by the erection of public fountains, as is done nearly everywhere on the continent, and on the laying out of more parks for the benefit of the denizens of the Great Metropolis—a proceeding, indeed, of the utmost necessity, as the Londoner must now walk miles before he can get to the fields to breathe pure air. Other subjects of equal importance are noticed, which our space will not allow us to allude to.

Passing from this subject by a not very unnatural transition, we find nearly two hundred pages devoted to a consideration of the properties of water, of bathing, and of the English and Continental Spas. While speaking of water, Mr. Curtis takes a brief notice of the prevailing whim of hydropathy, and shows, by his quotations from a shrewd old physician, Dr. Short, that the peasant of Graefenberg's discoveries have all been made years ago, as far as they are really useful, and the rest he is left in full enjoyment of. The portion of the work devoted to the consideration of the British Spas, especially the metropolitan, is singularly interesting. The author has collected a vast amount of information upon a subject hitherto much neglected, and we trust that the publication of this book will draw the attention of the British public to their own Spas, many of which are equal, and some superior, to the most famous Spa on the continent. The account given of the Cheltenham waters is of importance and great value, strengthened as it is by the testimony of the resident physicians. In the Montpellier spring, iodine is found in the form of hydriodate of soda, and as there is a small proportion of iron also in the water, its value is considerably enhanced in all cases where such a combination is indicated. The Brixton, Bath, Harrogate, Leamington, and other English springs meet with due attention. The tables of analysis, and the general directions given by Mr. Curtis, should be carefully studied by the invalid. All the principal German and other continental Spas are afterwards noticed, and their uses in disease, with the requisite precautions to be taken by invalids while drinking their waters, together with numerous tables of analysis, are correctly and carefully stated. His concluding remark is, that the British Spas are capable of doing quite as much for a large proportion of the visitors to the foreign springs as the latter, and should be tried first, except where the nature of the disease requires the use of waters peculiar to the continent. We must add also, that not a few of the foreign Spas possess springs differing but little from common water, and would never have become places of resort were these things regulated more by reason and less by fashion.

EDUCATION.—The Secretary of Public Instruction in France has salaried correspondents in the principal towns of Europe, whose duty it is to report to him any thing new and interesting about educational or other improving plans of a general nature.

MEDICAL MEMS. OF THE WEEK.

By PERISCOPICUS.

THE ANIMAL BODY.—All the parts of the animal body, says Liebig, are produced from a peculiar fluid, circulating in its organism, by virtue of an influence residing in every cell, in every organ or part of an organ. Physiology teaches that all parts of the body were originally blood; or that, at least, they were brought to the growing organs by means of this fluid. The most ordinary experience further shows, that at each moment of life, in the animal organism, a continued change of matter, more or less accelerated, is going on; that a part of the structure is transformed into unorganised matter, loses its condition of life, and must be again renewed. Physiology has sufficiently decisive grounds for the opinion, that every motion, every manifestation of force, is the result of a transformation of the structure or of its substance; that every conception, every mental affection, is followed by changes in the chemical nature of the secreted fluids; that every thought, every sensation, is accompanied by a change in the composition of the substance of the brain.

THE DUKE OF ORLEANS.—The Prince died in consequence of an *ecrasement* of the head, to use the phrase employed by Dupuytren in his clinical lectures to designate the severest and most complex physical lesions. The injury combines contusion, laceration, rupture, and fracture, and we add luxation—that is, separation of the sutures. These *ecrasements* without division of the skin, are usually caused by a blow of a beam of timber, or heavy mass of stone—by the passage of a heavily laden wagon over the head—by a horse falling on his rider, and particularly by a cannon-ball striking the head obliquely. Similar injury occasionally results from a fall, provided it be from a very great height, and the head first strikes the ground. But the carriage of the Prince was a low one; and he must have been projected with a very considerable impulse, as the mere weight of the body falling such an inconsiderable height could not account for such numerous fractures. The two forces, too, must have been so directed, that the head sustained almost the entire shock; or else we must suppose that there was extreme fragility of the bones. Examination of the body forty hours after death by Dr. Pasquier, first surgeon to the Prince Royal, assisted by M. Pasquier, first surgeon to the King, and MM. Fouquier, Anvity, Morcan, Blandin, Blache, Destouches, Saivé, and Seguin. **External appearances.**—Commencement of putrefaction, especially over the abdomen, and on the posterior part of the trunk. Cadaveric rigidity of the limbs. Contusions on the right jaw, the right eyebrow, and the right side of the forehead. Extensive bloody tumour on the back and right side of the head. Traces of contusion on the front of the knees, on the left-hand, and over the left trochanter. Sanguineous infiltration of the soft parts covering the superior, posterior, and lateral regions of the head, especially posteriorly, and on the right side. Separation of the lambdoidal suture, of the squamous sutures, the left mastoidal suture, the sphenoidal, and both sphenopetrous sutures. Numerous fractures, which may be divided into three series.—**Right side of Head.**—A fracture commenced at the right side of the lambdoidal suture, passing a little above the posterior and inferior angle of the parietal bone, through the squamous portion of the temporal bone, extended into the temporal fossa, and terminated on the great wing of the sphenoid bone.—**Left side of Head.**—Another fracture commenced at the left side of the lambdoidal suture, divided the parietal bone from behind forward to half its extent, and se-

parated from behind forward the scaly portion of the temporal from the rest of the bone; the squamous suture being, as has been already stated, disunited; this portion of the bone adhered to the soft parts only. A third fracture divided the sphenoid bone transversely at the level of the sella turcica. These fractures, together with the disunion of the sutures, separated the cranium into two portions, viz.,—1st. Anterior and superior portion comprising from before backward, the superior portions of the parietal bones, the squamous portion of the temporal bones, the frontal, the ethmoid, and almost the entire of the sphenoid bones. 2nd. A posterior and inferior portion, comprehending the inferior parts of the temporal and parietal bones, and the posterior parts of the sphenoid. These two portions of the cranium admitted of considerable motion on each other. The brain was very large. Its anterior inferior part, to the level of the fissure of Sylvius, was reduced into a reddish pulp as far as the bottom of the anfractuositities. A similar alteration, but much more limited in extent, existed behind and on the right side. There was considerable effusion of blood into the cavity of the arachnoid, and the sub-arachnoid tissue presented a very decided sanguineous infiltration. A few drops of reddish serum were found in the ventricles. The spinal marrow and vertebral column were uninjured. There was effusion of blood into the pleura. The lungs were gorged with blood, but were perfectly free from any adhesion. The heart and pericardium were natural. The abdominal viscera were sound.

TARTAR EMETIC IN HYDARTHROSIS.—M. Gimelle writes on large doses of tartarised antimony in dropsy of the joints. He has tried it in twenty-eight cases, in all of which the effused fluid was speedily absorbed, and in all but two a rapid cure effected; in the two exceptions pain continued in the articulation, in one a month afterwards, in the other for forty days. Tartarised antimony increases salivary secretion, causes abundant perspirations, especially during the night, and diminishes the quantity of urine secreted. Its first effect is to quiet the local pain; the second, to induce the absorption of the effused fluid, which it effects in from eight to sixteen days. The dose at first is four grains a-day, two more being added daily, but no larger dose than a scruple in the twenty-four hours. Its use is never preceded, in the practice of M. Gimelle, by local or general bleeding; but if there be much fever, the affected joint exceedingly red and hot, or the digestive apparatus the seat of great irritation, then he thinks it would be advisable to relieve these symptoms before administering the antimonial. The patients take their food and wine while under the influence of the antimonial, and some even require an additional quantity at the end of a few days. Tolerance of the medicine may be regarded as a sign of an approaching cure, but its absence does not prevent the removal of the dropsy. This treatment was pursued by Dr. Lafargue, of Saint Emilion, in a case of rheumatism of both knees with effusion into the joints, with marked success. Fifty-eight grains of the antimonial were exhibited in the course of the treatment, dissolved in seven mixtures, and taken in eight days. Vomiting was caused only once, and a desire for food was induced by the use of the salt. Neither perspiration, diarrhoea, nor diuresis, were produced.

SUPERFICIAL CANCERS.—M. Lisfranc shows that many of these admit of permanent cure by the simple ablation of the part of the organ which is diseased. A man consulted him in 1825, having a cancerous tumour, half an inch thick, surrounding the penis behind the gland, its antero-posterior diameter two inches. It

was ulcerated, immovable, adherent, with all the characteristics of cancer. Lisfranc decided on making an exploratory incision, and by a careful and slow dissection to lay bare the corpora cavernosa; if they were sound he would then proceed to extirpate the diseased growth, if not, he would amputate the penis. The additional pain of this proceeding would be well compensated by the prospect of retaining so important an organ. The operation succeeded remarkably well; the cavernous structure was healthy, only a small portion of the fibrous covering of the penis, where ulceration had taken place, being engaged in the disease, which was removed. The patient had not a bad symptom afterwards, and recovered perfectly in the course of three weeks. This case encouraged him to proceed in like manner with a patient who laboured under a cancer of greater extent, occupying the anterior portion of the scrotum, and about two inches of the skin of the root of the penis, and the posterior half of that organ. Every part was ulcerated, and the disease was of long standing. By a careful dissection, the testicles and spermatic cords were uncovered; the cancerous portion of the scrotum being cut away a similar exploration was made of the penis, which showed that the superior ligament was diseased, and must be removed. The carcinoma extended as far as the re-union of the corpora cavernosa, which were necessarily denuded as for an anatomical lecture, and even then it was requisite to scrape them with a bistoury to remove all traces of the disease. The patient recovered in rather less than seven weeks, preserving the virile power. Lisfranc demonstrates, also, that cancer of the tongue, of the vagina, of the ala nasi, the eyelids, the loins, the finger, &c., are in many cases superficial, and may be removed without permanent injury to the organs. At the same time he states, that while some of these cancers are regarded as deep-seated erroneously, the latter condition may exist, and require the complete amputation of the part.

A SUBSTITUTE FOR JALAP.—The powdered seeds of the *ipomœa cœrulea*, says Dr. O'Shaughnessy, in doses of 30 to 40 grains, act as a quick, safe, and pleasant cathartic. We have made this seed the subject of numerous experiments. In 100 cases in which it was given under our direction, in the Police Hospital of Calcutta, it proved purgative in 94, occasioned vomiting in 5, and griping but in 15, and produced on an average five stools within two hours and a half; the operation generally commenced in an hour, and in these experiments was never delayed beyond four hours.—The alcoholic extract, which consists of resin and oil, is deep brown, ductile, of excellent pillular consistence, and keeps for several months. In ten grain doses it produces all the effects of jalap with certainty and speed; the taste is scarcely perceptible. Dr. Chapman has used it in several cases at the General Hospital, and reported on it most favourably to the Medical Board; Dr. Leckie of Bhagulpore, Dr. Green of Howrah, Drs. Martin, Stewart, and Goodeve, have given similar accounts of its efficacy.—The seeds sell for four seers (8 lbs.) for the rupee; these will yield from 15 to 20 per 100 of alcoholic extract, and the whole of the alcohol may be recovered by distillation. We have thus a remedy of unparalleled cheapness, perfectly equal to jalap as a cathartic, superior to it in portability and flavour, and occurring in all parts of India. We are consequently independent in every respect of the South American article.

PATHOLOGY OF THE EAR.—M. Meniere says, the auditory apparatus may be distinguished into three parts, each bearing an analogy to one of the tissues of the body. Thus, the external ear [is] connected with the integu-

mentary tissue in structure, and is subject to analogous diseases; the middle ear is more nearly connected with mucous tissue, as we may gather from its communicating with the air-passages, the continuity of its lining membrane with the mucous tissue of the pharynx, and the effects of local treatment. Finally, the internal ear contains an organ which is essentially nervous. He has seen cases of nervous headache, in which the pain extended into the internal ear, and has discovered, as the result of numerous autopsies, that no part of the ear is exempt from the deposition of tubercular matter. Typhoid fever is likewise frequently followed by some degree of deafness; but the cause of the loss of hearing is not always the same.—The following are the results of his researches:—The meatus externus presents great variety of dimensions, both in length and breadth; but the same degree exists in persons enjoying the faculty of hearing in perfection. In six out of fourteen cases the membrana tympani was healthy; in the remaining cases the most obvious change was perforation of the membrane. Alterations of the cavity of the tympanum are rare; they are seldom found, except in cases where the permeability of the Eustachian tube was diminished or completely destroyed. Tubercles are occasionally found on the membrana tympani. The labyrinth is the place in which changes of structure most frequently exist. The author has seen, in two cases, the vestibule reduced to half its normal size and without any fluid. In one case the superior semicircular canal was obliterated; in two others the fenestra ovalis was closed up and the spiral plate of the cochlea made only one turn and a half. Finally, in one case the auditory nerve was reduced to one-half of its normal size.—From the observations of M. Meniere, it results that the loss of hearing in deaf and dumb persons is rarely congenital; it usually occurs in the first two or three years of life, and is produced by disorders of a convulsive kind. The primary lesions take place in the nervous portion of the auditory apparatus, and the changes which occur in the middle and external ear are for the most part consecutive to the former.

CANCER OF THE LIVER.—Dr. Boyd relates the case of a man, forty-nine years old, who had laboured under ascites for three months before he died, and anasarca for the last ten weeks. On examination after death, the abdomen contained a quart of a brownish-coloured fluid. The concave margin of the stomach was smaller than usual; around the pyloric extremity there was a carcinomatous deposit, which extended to and surrounded the pancreas, being firmly attached to it. The liver was the largest that had ever been seen by any of the persons present; during life it formed a projection in the epigastric and right hypochondriac regions, and weighed 192 ounces; the natural structure had disappeared, and its place was occupied by numerous carcinomatous tumours, from the size of a pigeon's egg to that of a goose's egg, the interspaces filled with loose cellular tissue; the gall-bladder was empty and collapsed; carcinomatous deposits were also found in Glisson's capsule. In another case of cancerous liver, in the person of a female, fifty-one years of age, the liver contained scirrhous tubercles and the left lobe was reduced on its under surface to a dark, pulpy state, similar to that of the anterior surface of the stomach on which it rested. The weight of the liver was fifty-six ounces. The peritoneum was studded in several places with tubercles, varying in size, and the minor curvature of the stomach and capsule of Glisson were occupied by a scirrhous mass. The anterior surface of the stomach was gangrenous. Dr. Boyd mentions also the case of a female, aged

twenty-four, whose chief complaint, in addition to the symptoms of ascites, was great tenderness on slight pressure over the abdomen, with most obstinate vomiting, resisting every attempt at relief. The sectio-cadaveris showed that the liver was the organ diseased; it was greatly enlarged, weighed sixty-three ounces, and had a hard marble-like appearance. The abdomen contained about fourteen quarts of straw-coloured serum, but there were not any traces of inflammation.

RUPTURE OF THE UTERUS.—The Journal de Medecine de Montpellier publishes cases to warn practitioners against the inconsiderate use of ergot of rye with the view of accelerating labour. This medicine, it says, should only be given in cases of inertia of the uterus. When the contractions of the organ are active, rupture is risked by its employment; especially if there exists any obstacle to the passage of the child, as in one of the cases cited, where the distended bladder prevented the descent of the foetus. In such circumstances the uterus may be excited to efforts which will not unlikely terminate in rupture.

THE SALIVA.—After practical observations, Dr. Wright reduces the morbid varieties of saliva into the following classification:—Deficient saliva, redundant saliva; *a* spontaneous, *b* excited.

Fatty saliva, sweet saliva, albuminous saliva; *a* transparent, *b* white.

Bilious saliva, bloody saliva, acid saliva, alkaline saliva; *a* fixed alkali, *b* ammoniacal.

Calcareous saliva, saline saliva, puriform saliva, foetid saliva, acrid saliva; *a* per se, *b* from foreign matters.

Coloured saliva, frothy saliva, urinary saliva, gelatinous saliva.

ORIGIN OF CHOREA.—That diet not sufficiently nutritious may (says Dr. Chowne), by producing debility, lay the foundation for chorea, we may be assured; but it is necessary not to lose sight of another fact, that good and sufficient diet may, in a defective state of the health, fail to afford good and sufficient nourishment; for it is not enough that proper food should be taken into the stomach, but it is necessary also that it should be properly dealt with when there, lest it should be converted into what is not merely without elements of a nutrient quality, but lest also it should be converted into elements that are noxious. It is scarcely possible in practice, whether with regard to children or with regard to adults, to give this fact too much consideration. We have demonstration in three patients of that which so often happens, and lulls persons into false security, viz., assuming that the vital functions are all going on healthy, because there is no striking, flagrant, self-evident demonstration of the contrary.

PRESERVATION OF LEECHES.—According to M. Derens, the best way of relieving the leech is the application of pressure, by which the whole of the blood is expressed, and after which the leech may be used again with safety and effect.

LITHOTOMY.—M. Ripault gives a case in which no calculus was found. The patient, an old man, had exhibited all the symptoms. On being sounded, the characteristic shock of the sound striking against a solid body was heard. The lateral operation was performed, and the forceps introduced several times, but nothing came away except some clots of blood. The pains which the patient had experienced formerly now disappeared, and did not return for several months; they then recurred with increased intensity, the difficulty of making water became much greater, the urine was ammoniacal, febrile symptoms set in, and the patient died six months after the operation. On examining the body, the prostate gland was found

much enlarged, very hard, and when cut into appeared like horn. When struck with the sound, it produced the same sensation which had deceived the medical attendants during life.

ATROPHY OF THE PENIS.—M. Bourignon gives the case of a man, thirty-eight years old, who had frequently the venereal disease, for which he had been treated by mercury. The penis gradually diminished in size, till it was not larger than that of a boy five years of age, and the hair of the pubis fell off. The man's skin also became white, the hands fine and soft, and the form of the body assumed the characters of the female; the character and temperament of the patient underwent analogous changes, but there was no alteration of the voice. Secondary and tertiary symptoms of syphilis made their appearance during this curious change. He was submitted to a course of iodine with mercury, and the syphilitic symptoms gradually disappeared. The genital organs seemed now to recover a little from the state of atrophy into which they had fallen, and some favourable change in the man's general appearance is already manifest.

TRANSPOSITION OF ABDOMINAL VISCERA.—M. Forliveri, of Bologna, gives the case of a man, aged forty-two, who died with symptoms of very acute enteritis. During life it had been observed that the patient's abdomen was extremely contracted, and the thorax enlarged. On examining the body, the greater portion of the intestines, together with the spleen, stomach, and epiploon, was found in the cavity of the thorax. An opening existed in the tendinous portion of the diaphragm, through which the abdominal viscera had passed, and M. F. thinks that this opening must have been congenital.

IRRITABLE BLADDER.—Mr. Soden gives cases showing the great utility of benzoic acid and balsam of copaiba, in combination, for irritable bladder. He draws particular attention to its deserved efficacy in diminishing, and, in some instances, completely suppressing, the muco-purulent deposition in the urine; but it is rather doubtful to which element in the combination this result is attributable. His formula runs as follows:—

Benzoic acid, one drachm;
Balsam of copaiba, half an ounce;
Yolk of egg, enough to form a mixture with seven ounces of camphor mixture. Two table-spoonsful to be taken thrice a-day.

FOREIGN LIBRARY OF MEDICINE, SURGERY, AND THE COLLATERAL SCIENCES.

(Exclusively compiled for the MEDICAL TIMES from French, Italian, and other Continental Periodicals.)

Letellier, Dr., Avis au Peuple—Advice to the People on the great resemblance and the small difference between venomous and alimentary Mushrooms. With coloured figs. of 16 species. Paris, 4to.

Quarizius, C. J., Handbuch—Handbook of Organic-technical Chemistry. Berlin, 4to.

Hoefer, F., Histoire—History of Chemistry from the oldest to the present Time. Paris, 2 vols. 8vo.

Barthelemy, Syphilis—A Poem in two cantos. Paris, 8vo.

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Lafond Salada, Herniary Surgeon to the Duke of Orleans, Des hernies—New Remarks on the Radical Cure of Simple Hernia. Twentieth edit. Paris.

Belliol, Dr., Traité.—Treatise on the Nature and Cure of the Itch, Syphilis, Cancer, by means of Vegetables, depurative and refreshing Medicines. Paris, 8vo. 1370 pages. Ninth edit.

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—Description—Abridged Description of the Secret Maladies. Paris, Dussillon.

Dalibon, Dr. D. G., Hygiène—Hygiene of the Teeth and the Gums. Dussillon.

MEDICAL NEWS.

MEDICAL ACTION.—A case was tried at the Shrewsbury assizes, on Thursday the 27th inst., which excited a more than ordinary degree of excitement among the medical men of the neighbourhood. The plaintiff was Mr. Henry Keate, of Shrewsbury, who sued a Mr. Clarke, as legal representative of a Mr. Samuel Perkins, whom plaintiff attended for 12 months previous to his death. Mr. Keate's bill was as follows:—

	£	s.	d.
From June 23rd to December 31st, 1840.	To Thirty-three Visits, at 7s. 6d. each	12	7 6
		3	7 6
		15	15 0

From Jan. 2nd to June 7th, 1841.	To 174 Visits, at 7s. 6d. each	65	5 0
		1	11 6
		15	4 0

Amount of first Bill 15 15 0

Amount of both Bills £97 15 6

Several medical men attested the moderation of these charges, and the plaintiff proved a general habit of attending the deceased and sending him medicine. The defence, conducted by Sergeant Ludlow, depended on the vague proof of the visits delivery of medicines, and the exorbitance of the charges; but the learned Judge (Erskine) declared, in summing up the case to the jury, that it was, in nine times out of ten, very difficult, if not impossible, for a medical man to prove the number of visits he had made to patients, because he often made them alone and without any witness. It was less difficult to prove the delivery of medicines and the quantity of them. This had not been proved in the present instance, because the witness Dawson could not speak to the items without the books, which were not produced, as they ought to have been. Probably it was because the whole of the entries were not in the handwriting of Dawson that the books were not produced. But if the jury were satisfied that the items were correct as to dates and quantities, they would then be guided in forming their

judgment on the prices, by what they had heard from the witnesses as to the usages of the profession. It would materially have helped them if the bill, which was said to have been delivered to Mr. Perkins, of fifteen guineas, at Christmas, 1840, had been produced; for if he approved of the charges in that, and the subsequent charges were found to be the same, undoubtedly it would have been conclusive evidence of the reasonableness of the whole bill. But there was no legal evidence as to the fifteen guinea bill being included in the gross bill. True, there was in the gross bill a charge amounting at the end of 1840 to fifteen guineas; but still it had not been proved that that fifteen guineas was the bill of which Mr. Perkins, according to the witness Sarah Thomas, had expressed himself so perfectly satisfied. Nevertheless, if they were of opinion that it was the same bill, their verdict would then be for the full amount; because in that case it would be evident that the deceased thought Mr. Keate's charges only fair and reasonable for the trouble

had given him; and if patients gave extra-trouble and were content to pay for it, during their lives, it was not for their administrators after death, and when sufficient funds remained to pay for that trouble, to complain of such charges; and he thought it much better that surgeons should be remunerated in that manner, rather than in proportion to the amount of drugs they prevailed upon their patients to swallow."—The jury returned a verdict for 97l. 15s. 6d., being the whole amount claimed, and 1s. damages; "a decision" says the *Shrewsbury News*, "which was received with the greatest satisfaction by the numerous friends of the plaintiff who thronged the court, and by the public generally."

NATIONAL VACCINE INSTITUTION.—Mr. Gillham, the resident medical officer, died on Saturday morning, the 30th ult. The vacancy gives a presentation to the Presidents of the Colleges of Physicians and Surgeons, and to Dr. Holland. The candidates are—Mr. Carpue, Mr. Simpson, and Mr. Hullier. Mr. Simpson is the probable successor. The appointment is 200l. a-year, with a large house, rent and taxes free, with coals and candles.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Showing the number of Deaths from all causes registered in the four weeks ending July 23, 1842.

	July 2	9	16	23
Small-Pox	9 ..	8 ..	6 ..	9 ..
Measles	25 ..	29 ..	29 ..	27 ..
Scarlatina	18 ..	29 ..	25 ..	23 ..
Whooping-Cough	21 ..	21 ..	17 ..	9 ..
Croup	7 ..	10 ..	3 ..	7 ..
Thrush	2 ..	5 ..	13 ..	7 ..
Diarrhœa	7 ..	13 ..	12 ..	12 ..
Dysentery	1 ..	— ..	2 ..	5 ..
Cholera	2 ..	— ..	1 ..	3 ..
Influenza	2 ..	2 ..	1 ..	2 ..
Typhus	16 ..	17 ..	25 ..	15 ..
Erysipelas	— ..	3 ..	5 ..	3 ..
Syphilis	— ..	— ..	— ..	— ..
Hydrophobia	— ..	1 ..	— ..	— ..
Diseases of the Brain, Nerves, and Senses	128 ..	136 ..	157 ..	166 ..
Diseases of the Lungs, and Organs of Respiration	221 ..	218 ..	206 ..	213 ..
Diseases of the Heart and Blood-vessels	22 ..	20 ..	14 ..	13 ..
Diseases of the Stomach, Liver, &c.	57 ..	70 ..	69 ..	80 ..
Diseases of the Kidneys, &c.	7 ..	3 ..	3 ..	4 ..
Childbed	5 ..	4 ..	3 ..	7 ..
Ovarian Dropsy	— ..	1 ..	— ..	— ..
Disease of Uterus, &c.	— ..	1 ..	3 ..	1 ..
Rheumatism	5 ..	2 ..	3 ..	2 ..
Diseases of Joints, &c.	7 ..	— ..	4 ..	1 ..
Ulcer	— ..	— ..	— ..	— ..
Fistula	— ..	— ..	1 ..	— ..
Diseases of Skin, &c.	1 ..	— ..	— ..	— ..
Diseases of Uncertain Seat	118 ..	86 ..	114 ..	70 ..
Old Age or Natural Decay	44 ..	34 ..	51 ..	43 ..
Violence, Privation, or Intemperance	26 ..	32 ..	18 ..	19 ..
Causes not specified	2 ..	— ..	— ..	2 ..
Deaths from all Causes	753 ..	745 ..	755 ..	744 ..

ROYAL COLLEGE OF SURGEONS, LONDON.

List of Gentlemen admitted Members on Friday, July 29, 1842:—

H. P. Freeman, B. Clarke, W. Folwell, R. George, F. J. Robinson, H. B. Evans, T. Boycott, A. Lacey, H. M. Macpherson.

Admitted Monday, August 1, 1842:—

C. H. Moore, W. N. Spong, E. Griffith, H. E. Norris, J. Morley, W. H. Pettigrew, H. Neville, E. Miller, W. T. Billings, J. A. J. Martin.

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TESTIMONIALS.

From J. G. Andrews, Esq., St. Helen's-place, President of the Royal College of Surgeons.

I have worn for some time the new patent boots called Impilia, with much comfort and satisfaction. I find the boots possess great elasticity, evenness of pressure, and I am enabled to walk a greater distance without inconvenience.

J. G. ANDREWS.

April 20, 1842.

From Anthony White, Esq., Parliament-street, one of the Council, and late President of the Royal College of Surgeons.

I can with much satisfaction recommend to the public the boot or shoe which is denominated Impilia. Its peculiar advantages over all other boots or shoes are, that it is impermeable to wet and damp, and always gives an agreeable and constant warmth to the feet; is also elastic, and is admirably adapted to tender and crippled feet from gout or other maladies.

ANTHONY WHITE.

April 6, 1842.

From Dr. Paris, of Dover street, London.

I have examined and worn with comfort and satisfaction shoes constructed with intermediate soles of feet, to which you have bestowed the name impilia. They undoubtedly possess an elasticity and capacity of adaptation to the form of the foot not possessed by ordinary shoes, and they have the rare merit of not creaking. They are, moreover, warm and dry.

J. A. PARIS, M.D.

From Dr. Roots, Russell-square, London.

Dear Sir—I have now worn for some time a pair of boots with intermediate soles, which you term Impilia. They are admirably adapted for the ease and comfort of tender feet, and the elasticity of their tread is very pleasant. I can with confidence recommend them for general use, while for medical men they possess the very rare advantage of not creaking, and consequently are so desirable in a sick room.

H. S. ROOTS, M.D.

W. Baker, Esq.—April 25, 1842.

From Dr. Hodgkin, Lower Brook-street, London.

Having not only examined, but put to the proof of experience, the patent soles invented by my friend Wm. Baker, M.R.C.S., and termed Impilia, I have no hesitation in saying that they are a very decided improvement on the common method of construction. They are not only much more agreeable to the sole of the foot, but promote a warm and uniform temperature as well as freedom from damp, whether entering from without or derived from the feet.

THOMAS HODGKIN, M.D.

30—4, 1842.

From John C. Taunton, Esq., M.R.C.S., 48, Hatton-garden.

I have worn with satisfaction the boots with the intermediate soles of Impilia. They are worn with more comfort, adapt themselves better to the form of the foot, and are impervious to wet.

JOHN C. TAUNTON.

May, 1842.

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(Signed) "C. H. WILKINSON, M.D."

To Mr. C. DINNEFORD, Bond-street, London.

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A Journal of English and Foreign Medicine and Medical Affairs.

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ORFILA'S LECTURES ON ARSENIC.

Containing an Account of the different Operations performed upon the Body of Laffarge.
Collected and Translated by JOHN DAL PIAZ, Pharmacien, and Laureate of the School of Paris.

LECTURE III.

ALLOW me, gentlemen, before commencing this lesson, to present to you the dog upon which, the day before yesterday, I practised the ligature of the œsophagus; I see many among you who were present yesterday morning, in the Practical School, when I untied his œsophagus; you may observe the animal is rather weak and feverish, nevertheless he has already taken food, and in a few days you will see him quite recovered.

Gentlemen, in my last lesson, I principally treated of the arsenious and arsenic acids; I made known to you the means by which they may be distinguished from each other; I dwelt particularly upon the action of sulphuretted hydrogen, when brought in contact with a solution of either, and to which a few drops of chlorhydric acid had been added, and I have taught you how to extract the metal from the sulphuret thus formed. I have said this was the only operation resorted to, for the elimination of metallic arsenic, previous to the year 1838, since which period legal chemistry has been presented with an instrument producing much more accurate results in cases when very small doses of the poison are to be acted upon. I also added that the elimination of arsenic, from its sulphuret, by means of barocal and carbonate of potash, was not to be discarded in consequence of the greater sensibility of the new method.

Finally, I mentioned the use of these two acids, and the danger of prescribing large doses of their compounds. The principal object of this lecture will be to examine the different salts formed by arsenious and arsenic acids, after which I shall enter upon the medico-legal question of arsenious acid.

History of the salts formed by the arsenious and arsenic acids in combination with other bodies.

All the salts formed by these two acids are insoluble, with the exception of those of potash, soda, and ammonia; consequently it is these three only we shall have to study, for it is necessary (as I have often stated it before,) for the examination of all insoluble salts, that they should previously be rendered soluble.

Soluble arsenites produce a copious white precipitate of arsenious acid, when chlorhydric acid is added to their concentrated solutions; whilst the soluble arseniates under the same conditions afford no precipitate, owing to the arsenic acid liberated being extremely soluble. You will understand from this why concentrated solutions are to be used.

These same solutions, either concentrated or diluted, afford, when acted upon by a solution of ammoniated sulphate of copper, a green precipitate, the solution is that of an arsenite; if, on the contrary, it is a solution of an arseniate, a light blue

precipitate is formed. The formation of this precipitate is an illustration of one of Berthollet's laws; "An insoluble will always be produced by the mutual action of two salts which are soluble, provided they contain in their chemical composition the elements of an insoluble salt." In this case we have two acids, and a metallic oxide, which by combining form two insoluble salts, consequently this decomposition must occur.

Soluble arsenites afford a yellow precipitate with nitrate of silver: the arseniates with the same reagent give a brick-red precipitate.

Action of Sulphuretted Hydrogen.

All soluble salts of arsenious or arsenic acids, when submitted to the action of sulphuretted hydrogen, are attended with remarkable results, and which should be particularly noticed.

A diluted solution of any arsenite will produce no yellow colouration, nor give any precipitate by sulphuretted hydrogen, unless a sufficiently strong acid is previously added to combine with the base of the salt; in this case, the arsenious acid liberated, instantly decomposes the sulphuretted hydrogen with the formation of a yellow precipitate of sesquisulphuret of arsenic.

If, instead of a diluted solution we make use of a concentrated one, it may happen the sulphuretted hydrogen will produce a yellow tinge without the addition of a strong acid. Any arseniate under the same conditions will also give a yellow precipitate, provided the solution is heated.

All arsenites and arseniates in solution, when introduced into Marsh's apparatus, will produce arsenical stains in the same manner as though the arsenious or arsenic acid only had been introduced. This effect is produced by the sulphuric acid which uniting with the base of the arsenical salt liberates its acid.

Gentlemen, I have now completed all I have to say concerning the chemical characters of arsenic and its compounds; it now remains for me to speak of its deleterious effects on the animal economy, and the mode of acting in cases of medico-legal research.

Of all the compounds of arsenic, arsenious acid possesses the deleterious properties in the highest degree. The facility with which it may be obtained, and the resemblance its powder has to that of white sugar, has often induced and will again induce criminals to make use of it as a very convenient agent for committing homicide.

When applied upon any tissue of the animal economy, it produces death with certainty by its action upon the organs of circulation, the nervous system, and the intestinal canal.

About two grains of arsenious acid are sufficient to poison a strong dog, and about twice that quantity will destroy the life of a man. Arsenious acid acts much more powerfully when in solution than when in the solid state.

Medico-legal Question.—It must never be asserted that death has been produced by arsenious acid until the subject contained under the three following heads has been entirely exhausted:—

1st. The medico-legal researches.
2nd. The symptoms observed in cases of poisoning by this acid.

3rd. The pathological anatomy, or post-mortem lesions observed in cases when death has ensued from this poison.

It is only after having well examined the subject under each of these divisions that the experimenter should decide either affirmatively or negatively. Let us now examine as to what course should be taken in a case of poisoning by arsenious acid: we will first notice the most easy case, which is also the most common; it is the following. The patient is dead, and the poison can be found in the matter ejected, or in that which remains in the digestive canal. In the second case, no trace of

poison can be found either in the ejected matter, in the stomach, or in the digestive canal itself. Finally, we shall examine the numerous objections offered to our new system of research; these objections once exhausted, we shall then have terminated the subject of poisoning by arsenious acid.

CASE 1.—It will be necessary in the first instance to ascertain if any of the poison remains not swallowed by the deceased. I think it is quite unnecessary I should enter into any details with respect to the method of recognising arsenious acid if any should be found either in solution or in the solid state; you cannot have forgotten what has already been stated upon this matter. I shall now suppose all the poison to have been swallowed; the patient may have vomited or not. In the former case all the ejected matter should be carefully collected and laid aside for examination; the interior of the body is then to be examined as follows. After opening it, the rectum must be carefully tied, and also the superior part of the stomach, a little above the cardia. The digestive tube must then be entirely extracted from the body, and afterwards opened in the whole of its length. If the arsenious acid has been administered in the state of powder, some of it may probably be found in the internal coatings of the stomach or in the intestines; even in cases when repeated vomiting has occurred, the small grains of arsenious acid may often be found adhering to the internal folds of the stomach or in the intestinal tube.

In such a case what would be easier than to extract these small grains with the point of a scalpel, or of a penknife, and then subject them to chemical analysis? But be careful, gentlemen, not to confide too much in the presence of small white grains; remember what I have already said to you relative to the hard white grains of fatty matter observed by Monsieur Chevalier and myself, which not only resemble arsenious acid in appearance, but also possess the property of forming a yellow precipitate, when brought in contact with sulphuretted hydrogen; and again, this yellow precipitate being dissolved in ammonia, forms a colourless solution.

However, you know sufficient of this subject to render any further observation unnecessary. Let us, therefore, proceed, at once, to examine the matter ejected and that contained in the stomach.

The digestive tube being emptied must be well washed with distilled water; the liquid thus obtained is then to be added to the matter ejected and to that contained in the body; the whole must then be thrown upon a filter to separate the solid from the liquid, both of which must be carefully retained. This operation requires a considerable time in consequence of the viscous state of the liquor, which retains in solution a quantity of albumen, and other animal matter. It is, therefore, necessary to strain, and then boil the liquid thus obtained about ten or twelve minutes previous to throwing it upon the filter, which should be moistened with distilled water, to prevent any oily or fatty matter from adhering to it, thereby preventing the passage of the liquid through the greased parts. The scum remaining in the filter should also be carefully preserved in case it should become necessary to submit it to analysis.

The filtered liquid will be perfectly clear, but more or less coloured. This last fact alone is sufficient to legitimate my aversion to the use of certain tests, such as lime-water, ammoniated sulphate of copper, &c., &c.; and although I have formerly recommended the use of these in such a case, I must now protest against such a practice, since experience has convinced me of its inconvenience.

For example, take a certain quantity of this yellow liquid, and add to it a solution of ammoniated sulphate of copper, you will immediately have formed a green colouration merely produced by the mixture of the blue and yellow liquids, independently of any chemical reaction. Can you then state this

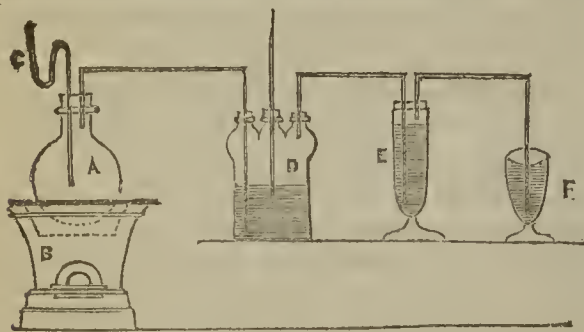
green colouration to result from the presence of arsenite of copper? Certainly not.

Again, by acting in this way, a certain quantity of the liquid is wasted, and if you had half-a-dozen other tests to apply, you would soon waste one-half of the liquid, or perhaps the two-thirds; you would then have only a small portion remaining, which might not contain the poison in sufficient quantity to be rendered evident even by Marsh's apparatus.

Such is the great inconvenience of the ancient method of research, and not in this case alone; it might occur that no precipitate should be produced even when the liquid contains arsenious acid in no small quantities; this is due to the animal matter, which, in this case, is so strongly attached to the poison as to entirely protect it from the action of the most efficacious reagents, such as sulphuretted hydrogen, &c.

As a general rule, animal matter must always be guarded against; it is this which presents the greatest impediment in all our operations, and which might even lead to wrong conclusions.

Formerly, the liquids without being clarified by heat, were filtered, and introduced into an apparatus disposed like this I place before you.*



The object of this apparatus was to saturate the liquid with sulphuretted hydrogen, which almost always rendered it turbid, and even formed a yellow precipitate in some cases, when not the slightest trace of arsenious acid was present, as I have already stated.

What became of this liquid saturated with sulphuretted hydrogen? how did they separate the sulphuret thus formed when the liquid really contained arsenious acid, or an arsenical compound?

No other method was known than that of allowing the sulphuret to subside, which required a very long time; at least eight or ten days; sometimes it might even require a whole month. There are many persons who do not believe this, because they have never experienced such an inconvenience; it was for this reason I was blamed for having stated to the Court of Assizes, at Dijon, (in the trial of Nicholas Mercier,) that the first experimenters had not waited sufficiently long for the yellow precipitate to subside; that they should have waited several days instead of waiting only three hours.

To convince you that what I stated was correct, here is a vessel containing a decoction of animal matter to which two grains of arsenious acid had been added. This decoction was acidulated with chlorhydric acid, and afterwards saturated with sulphuretted hydrogen. This operation was performed seven days since, yet you may plainly see all the sulphuret has not yet subsided; the whitish sediment at the bottom of the vessel is only formed of the animal matter which was in solution previous to the absorption of sulphuretted hydrogen.

No doubt you will say, is there no means of avoiding this great inconvenience? Yes, gentlemen, there is a remedy.

Evaporate the liquid until it has acquired the consistence of a thin syrup, then, by adding a sufficient quantity of pure alcohol, the animal matter will be precipitated, at the same time the oxygen-

* A, is a glass vessel, in which is disengaged the sulphuretted hydrogen by means of sulphuret of antimony and chlorhydric acid; B the stove upon which the matrass may be gently heated; C is a safety tube, through which the acid is introduced into the apparatus; D a flask, containing water to wash the gas, previous to its arriving in the epruvette E, in which is placed the suspected liquid; the glass F, contains a solution of subacetate of lead by which the excess of gas is absorbed.

ated arsenical compound is dissolved. This alcoholic solution is then filtered, and submitted to the action of sulphuretted hydrogen, and in this case if any precipitate is formed it will quickly subside.

Not later than yesterday I made some very delicate experiments, in order to ascertain the exact quantity of arsenious acid which can be dissolved by one ounce of alcohol; the result was, that one ounce of this liquid at the mean temperature can dissolve one grain and a half of arsenious acid.

This quantity is very small, but we must remember that arsenious acid already dissolved in a liquid can be much easier taken up by alcohol, and in a larger quantity, than when in the state of a dry powder.

Before proceeding any further, I wish to make a few remarks upon what has been said relative to the use of ammoniated sulphate of copper as a test for arsenious acid.

It was first stated in England that this reagent was of no value whatever, in consequence of its giving a green precipitate or sediment with many other substances. Onion juice was offered for an example, and Monsieur Raspeil has not forgotten to repeat the same observation. For my part, I must candidly confess, I should think it scarcely worth notice, even if the assertion were true, to the last letter of the word; for supposing we had a green precipitate, with ammoniated sulphate of copper, this alone would not be to us a sufficient proof of the presence of arsenic; no medico-legal authority has ever said the presence of arsenic can be determined by the single fact of its affording a green precipitate with this test; on the contrary, we are told to collect this precipitate with care, and ascertain by the strictest investigation whether it be an arsenical compound.

I now exhibit to you a filtered decoction of onions, also some of the juice filtered and some non filtered; to each of these liquids I add ammoniated sulphate of copper. The filtered decoction affords no precipitate; if any occurs, after a time it can only be a mucous deposit, which may have a green appearance, from the mere combination of the blue reagent with the yellow decoction; a green colour we know is always the result of a mixture of blue and yellow. The filtered juice affords no more precipitate than the decoction; but a different result occurs with the non-filtered juice, and this is not to be wondered at, for it contains a great quantity of insoluble vegetable matter; even, in this case, the sediment is not green, it is of a dirty white colour. Must not our conclusions from these experiments be, that what has been stated about onions is quite false?

Gentlemen, we are now about to commence upon another subject. We suppose the liquids operated upon to have yielded no arsenic; we must, therefore, carry our investigations still further. We must cut the digestive tube in small pieces, and add to this all the animal matter resulting from the clarification and filtration of the liquids; the whole must then be boiled in distilled water for four or five hours; we then filter, and evaporate the liquid to the proper consistence; it is then acted upon by pure boiling alcohol, filtered, saturated with sulphuretted hydrogen, and finally, if a sulphuret is formed, this is carefully dried and decomposed by charcoal and carbonate of potash, as said before.

We now proceed still further. Let us again suppose nothing to result from this last operation; we then collect the animal matter, intestines, &c., &c., remaining on the filter, and subject them to the process of carbonization, first, by nitric acid; second, by nitrate of potash.

The object of these two operations is to destroy all the animal matter. Let us examine what takes place during the operation.

What is animal matter? It is a combination of carbon, hydrogen, oxygen, and azote; add to it a sufficient quantity of oxygen, which is produced by the nitric acid, and we have formed, carbonic acid, water, ammonia (nitrogen and hydrogen), and a small portion of cyanogen (carbon and nitrogen), all of which are volatilized. But the excess of carbon will remain, and with it the arsenical compound, transformed by the decomposition of the nitric acid into arsenious or arsenic acid.

I now proceed to operate in your presence; I place the animal matter in a large porcelain cap-

sule, with twice its weight of nitric acid; I then place the capsule upon a moderate fire. In the first instance bi-oxide of azote is emitted, and the liquid begins to boil; after a short time it acquires a brownish appearance and begins to thicken. If the heat is still continued, it will soon carbonize at the circumference, and suddenly there is produced a black smoke, so dense, as to render the contents of the capsule invisible. There will then be found a mass of very porous charcoal in the capsule; this is to be well bruised, and boiled for half an hour in distilled water; the filtered decoction is then introduced into Marsh's apparatus, and should any froth occur, a small quantity of olive oil may be added.

The mode of proceeding you have just witnessed is my own; it was not described by Valentine Rose as Monsieur Raspeil has asserted. Valentine Rose, it is true, recommended the use of nitric acid, but he never said the action of heat should be continued until the matter became carbonized.

Gentlemen, I was desirous you should witness this mode of carbonization, that you might not be embarrassed, in case you were called upon to perform a similar operation. The quantity of nitric acid required will depend upon the nature of the matter to be carbonized; for instance, I know from experience that six parts are required for the brain and for fatty matters, whilst muscle requires three parts, and gelatine only one.

LECTURES ON CHEMISTRY.

By JOHN SCOFFERN, M.D., Lecturer on Chemistry at the Aldersgate School of Medicine.

IN our last lecture, Gentlemen, I succeeded, by means of experiments, with very simple apparatus, to give an example of all the leading properties of electrical excitation *save one*. I explained to you that the terms electrical fluids, and electrical currents, had probably no foundation in nature, and were merely introduced to represent certain progressive assumption and revolution of polarities. I showed you one method of producing electrical excitation—that this excitement was always attended with the manifestation of two qualities, spoken of as the two electric fluids by Du Fay, and as the comparative redundancy or deficiency of one fluid by Franklin. All these are the properties of electricity a person would first recognise, and which he would find but little difficulty in explaining, on the assumption of an electric fluid or electric fluids.

Now there are instruments without number for illustrating the properties alluded to, and the latter are taken advantage of for many useful purposes; but I forbear to mention these instruments or purposes at present, seeing that your ideas respecting electrical science would not be enlightened thereby.

I do not even think it necessary to enter upon any detailed description of the various forms of electrical machines, as a few minutes inspection of their mechanism will render perfectly obvious the rationale of their action. You have said already, that friction is one means of developing electrical excitement—indeed, the only means we have hitherto employed. Now all the various forms of electrical machines have one common object in view, namely, to develop electrical excitement by friction, and by a proper arrangement of conducting and non-conducting media, to localize this excitement in certain other portions of the apparatus. The last great quality of electrical excitement, concerning which I have to treat, and to which I have already made so many allusions, is called *induction*; the right comprehension of which has only been achieved within the last few years, owing principally to the indefatigable exertions of Dr. Faraday. How important it must be to acquire a true comprehension of this inductive quality you may form some idea, when I tell you that it is an invariable concomitant of electrical excitement; and in no case are the theories of Franklin and Du Fay more weak or incompetent to the end proposed, than when we attempt to explain the phenomena of induction according to their tenets. I have a great deal more to say

about this inductive quality, but it will be necessary, as a preliminary, to give you some prominent example of its development.

We have already seen that electrical excitation proceeds through glass with such difficulty, that the latter substance was formerly termed a non-conductor; at present, as you are aware, the designation *imperfect conductor* has been substituted in its place. We have also seen that metals conduct this excitation very well. Now when the science of electricity was still in its infancy, one of its early cultivators, Muschenbroek by name, of the University of Leyden, thought he would see if the agent of this excitement, which agent he called the electric fluid, could not be bottled up; accordingly he took such steps as his previous knowledge of electrical phenomena suggested. He put some metallic filings into a glass phial, and established a communication between them and an excited electrical conductor, holding all the time with one hand the exterior of the bottle.

All he expected from these conditions was, that the electric fluid, as he called it, would be absorbed, so to speak, by the metallic filings, and there confined; because the non-conducting materials, glass and air, surrounding it on every side, would prevent, as he thought, its escape. The conditions of this experiment, however, were such as to develop results that he had by no means anticipated, and which electrical theory was in no way prepared to grapple with. On touching a wire which communicated with the metallic filings, Muschenbroek experienced such a violent blow across the body that he said he would not receive the like even if all Leyden were offered him as the price; indeed, the effects of this electrical shock on his frame were described as most marvellous; he stated, among other things, that the electricity lingered in his system, inasmuch as the shock was also experienced by his wife when he got home.

I need scarcely tell you that his account was very much exaggerated; the shock which he received could not have been very great, and we must attribute his description of its terrific violence to the unexpected manner of its occurrence. There is no doubt, however, that the apparatus just described was capable of imparting a much stronger shock than any one had hitherto experienced by artificial means. Let us see what were the conditions thus obtained. They were a conductor inside, non-conductor in the middle, and a conductor (the hand) outside. You will remember that Muschenbroek imagined the inside conductor to be alone efficacious, merely acting as an absorbent to the electricity, whilst the glass walls opposed an obstacle to its escape. To what extent this theory is false, you may form some notion, when I inform you that the inside conductor is not absolutely necessary to the effect, whereas the outside one is. Soon after this experiment of Muschenbroek, there were formed instruments, called to this day Leyden jars, glass vessels of capacity, coated inside and out with metallic foil, and supplied with a metallic bar or chain in communication with the internal coating. Thus is formed an instrument capable of developing all the effects of Muschenbroek's primitive phial, to a far greater extent. In order to charge it, the metallic bar or chain in communication with the internal coating must be brought into contact or near approximation with the charged prime conductor of an electrical machine, the outside coating remaining in communication, directly or indirectly, with the ground. If the internal metallic communication be held a little way from the prime conductor, sparks will be seen to pass from the latter to the former, at first large, and with rapidity; then gradually becoming smaller, and at longer intervals; at length they are no longer observed, and the jar is said to be fully charged. If it be attempted to impart to it still more electrical excitement, either a discharge will take place between the internal and external coating, over the edges of the jar, or the intermediate glass will be broken; or, owing to the thickness of the latter, no more electricity will be received. It is by means of the Leyden jar, or collections of them, termed batteries, and so arranged that they may be charged and discharged simultaneously, that all the most principal effects of electricity are exhibited.

That the internal part of such a jar should become electrically excited under the conditions indicated is not extraordinary, on the supposition that this excitement depends upon the acquisition of a fluid; but why the external coating should become excited too, in an opposite state, is not so clear.

In all the range of science, I do not know one instance of the explanation of a phenomenon being so unsatisfactory, until within the last few years, as of the one just alluded to; indeed, the so called explanation was merely limited to a statement of the phenomenon, to this effect—that whenever one conductor was charged with one kind of electricity in the vicinity of another conductor, separated from the latter by an intervening non-conductor; the second conductor became excited in an opposite condition to the first, because each kind of electricity attracted its opposite, and the process was termed *induction*. This does not amount to an explanation, but merely to a statement; and I know of no statement which is calculated to produce such false impressions. Founded as it is on the idea that electricity must necessarily be a body instead of a condition, and recognising the existence of perfectly non-conducting media, it assumes the non-conducting medium to act merely as a dam or barrier in preventing the escape of electricity, and denying as it does any further agency to this non-conducting medium, it affords no good explanation of the reason of the electrical disturbance in the metallic coating on the opposite side.

Nothing can be more evident than the deduction, that some power or influence, no matter of what kind, must of a necessity permeate the intermediate glass or other interposed body, or otherwise the thickness of the latter would not influence the result which it can be proved to do, a fact for which no provision was made in the former statement of the phenomenon of induction. But the most important fallacy which this statement is calculated to raise, nay, *must inevitably raise*, is, that the process termed electrical induction is merely a casual, instead of an universal concomitant of electrical excitation; nothing can be more opposed to truth, nothing more likely to create dissatisfaction and disgust in the mind of a student of electricity than this. In the formation of the Leyden jar, it is true that all conditions for enabling the process of induction to take place are well fulfilled; but it is also true, that *except these conditions are always fulfilled to a certain extent, there can be no such thing as electrical excitement*. We are indebted to the beautifully devised experiments of Dr. Faraday for a proof of the fact, that the particles of bodies termed non-conductors, when employed as agents of separation between metallic lamina or other conductors, (such for instance as obtains in the glass of a Leyden jar,) are actually electrically affected; the mode of this affection is too recondite for the investigation of science; but he has proved by experiments, which I will hereafter show you, that they are by no means passive, as was assumed by former electricians.

We have seen that the terms conductor and non-conductor are not strictly correct, and we have intimated that what is called *electrical conduction, electrical currents, &c.*, terms indicative of the passage of something, may after all be used in a figurative sense; that, in short, the progressive manifestation of electrical action may depend upon the progressive change of the relation of particles to each other, rather than on the progression of a current of any distinct substance along or between them. This supposition being granted, it is very easy to assume that the particles of different bodies may require different amounts of a similar force to throw them into similar movements; and moreover, that such movements in different bodies may require different amounts of time for their accomplishment; an assumption by which we do away with the necessity of recognising a distinction between conductors and non-conductors.

Faraday's investigations render it probable that the phenomena of conduction and induction, instead of being specifically different, merge into another more comprehensive generalisation; that electrical excitement is invariably concomitant with

a series of inductions; that is to say, a production and resolution of polarities, which occurring consecutively, give rise to a progressive effect, namely, electrical impulse, or velocity. Supposing this theory correct, what is termed passage of the electric fluid will correspond with this progressive assumption and resolution of polarities. In other words, Faraday regards conduction in the light of a series of very rapid inductions between the particles of the conducting body, so rapid, that the transient polarity of their particles cannot be recognised, and is merely inferred as the result of inquiries on bodies in which this assumption of polarity is not so easily resolved (non-conductors.)

It is evident that the two sides of the glass in a Leyden jar are affected with opposite electrical energies; hence glass, and all other substances in the same predicament, are termed, by Faraday, *dielectrics*. It appears, then, that the science of electricity has been rendered confused by the pointed distinction formerly drawn between conduction and induction; a distinction, which, in reality, does not obtain, and which never would have been drawn, had the fact been remembered that no such thing as a singly electrically excited homogeneous particle could exist, because this excitement is nothing but a certain disturbance of equilibrium, either of matter or motion; and equilibrium, implying as it does comparison, must require, at least, two atoms for its exercise. It is impossible, then, according to this theory, for a body to become electrified in one state, without a simultaneous assumption of polarity of the molecules of all bodies in contact with it. This assumption of polarity in certain bodies, *conductors*, is followed by rapid resolution; in others, *non-conductors or dielectrics*, the resolution does not take place so easily. It appears, then, that the property of conduction, as understood by the older electricians, has in reality no existence, and that which appears to be conduction, merely results from a rapid development and resolution of certain atomic peculiarities. Instead, therefore, of recognising *induction*, as an attendant upon, or producer of one class of electrical phenomena, you should habituate your minds to the consideration of it as an invariable concomitant of every case of electrical manifestation.

In the origin of electrical excitement, its progress along conducting media, so called, the passage of sparks, the attraction of light bodies, and, in short, every other electrical phenomenon, may be recognised; this induction is more evident in some cases than in others, it is true, but if ever your mind gets confused, and begins to form wrong ideas of electrical excitation, as is very likely to occur from the necessarily frequent use of such words as positive and negative electricity, electric currents, and the like, fall back upon the fact, that if the universe were reduced to one atom it could not become electrically excited; that the excitement in question is occasioned by the disturbance of some kind of equilibrium which necessarily involves, as I have before stated, the existence of at least two atoms. Whenever you have them of a positively or negatively excited body, remember that it is necessarily connected with a polarity between the particles of all dielectrics in contact with it, influencing an opposite condition in all neighbouring conductors so called.

ERRATUM in last lecture—read torpedo, or electric ray, for electric eel.

COURSE OF CLINICAL LECTURES ON PNEUMONIA.

Delivered at the Hospital La Charité, by Professor CHOMEL.

LECTURE XXIII.—FORMS OF PNEUMONIA DEPENDING ON AGE.

Pneumonia of the Old Man.

Physical Signs—Auscultation.—The *crepitant râle* is rarely heard in the old man with the same distinctness as in the adult; the bubbles composing it are larger and more humid, appearing to be in relation with the size of the rarefied vesicles. Most frequently, in the first stage of pneumonia, we hear only a mucous râle occupying a variable extent, and which is often replaced by true *gargouillement*, owing to the copious mucosities filling up the

bronchi. MM. Hourmann and Dechambre have frequently ascertained, even in the first stage of the disease, the existence of a *bronchial souffle*, on a level with the root of the diseased lung, and which appears and disappears for a short time to give place to the natural respiration. In some cases, at the autopsy no lesion was discernible at the corresponding part. These facts show the facility with which the bronchial souffle is produced in old men, a facility which depends on the size of the bronchial tubes, and also in some individuals on the atrophy and feebleness of the pulmonary parenchyma. This symptom seems likewise to depend in some cases on the supplementary respiration established in the regions bordering on those parts invaded by sanguineous congestion, a congestion which almost always takes place rapidly in the old man, and which at the same time occupies a large extent. There is another species of supplementary respiration, of equal importance with the preceding, inasmuch as it may lead us to discover, or at least to suspect, a commencing pneumonia. In the normal state, the respiratory bruit of the old man differs from that of the adult in its size and clearness; but on the occurrence of inflammation in the lung, the sound portion takes on an increased activity, and gives rise to a vesicular murmur, having all the characters of that of the adult; thus the bruit which is normal in the adult becomes morbid in the old man. In the second stage of pneumonia in the old man, bronchial souffle is almost constantly heard; it is frequently accompanied by *gargouillement* or a crackling noise, and sometimes by a *bruit de frottement*. It is in this stage that the *supplementary bronchial souffle* acquires a great intensity over the root of the lung; and if conjoined with abundant mucous r  le, it may easily induce the idea of a large pulmonary cavern. *Resonance of the voice* is not so constantly combined with bronchial souffle in the old man as in the adult; the feebleness of the voice, natural to the former, contributes without doubt to the absence of this phenomenon. The resonance of the voice also, when it does exist, partakes more of the character of *  gophony* than of *bronchophony*; for the voice of a great number of old men is naturally *  gophonic*. Auscultation seldom establishes a marked difference between the second and third stage. Abscess of the lung gives rise to the same phenomena as in the adult.

Percussion in these cases becomes of the greatest importance, auscultation being often difficult and deceptive. Before hepatization, according to MM. Hourmann and Dechambre, the sound is more modified than in the adult; but this modification depends in some measure on age, and hence we must often consider as obscure, in old men, a thoracic sound which would be clear in the adult. For the same reason, hepatization does not always give rise to absolute dullness, especially when it is seated at the anterior and superior part of the chest. Posteriorly, the dullness is always much more marked.

B. Functional Signs.—Pain.—In the majority of cases there exists only an uneasy sensation, of a vague character, sometimes affecting the diseased side of the chest, at other times the whole thorax, and especially its anterior part. This painful sensation has been observed in cases where the pleura was sound, as well as in those where it was diseased. In the same manner pain in the side has often been wanting where the pleura has been inflamed, even over a considerable extent. This uneasy sensation, where it exists, is remarkably increased by percussion over the inflamed part.

Dyspn  a.—In many cases the patients do not complain of dyspn  a, and the respiratory movements are not at all constricted. At other times, without a positive difficulty of breathing being complained of, the movements of the thorax are very irregular. At first slow and feeble, they suddenly become elevated in force and frequency, and the countenance assumes an expression of anxiety. It is especially in inflammation of the inferior lobe that dyspn  a is wanting; while in that of the upper lobe the difficulty of breathing frequently becomes so urgent as almost to induce asphyxia. This symptom seems also to be more marked in inflammation of the right than in that of the left lung.

In the third stage the *breath* sometimes exhales a manifest odour of pus.

Cough is a more important symptom in the old man than in the adult; it exists in the majority of cases, but from its excessive feebleness, great care is sometimes requisite to enable the physician to discover it. In certain cases, it differs essentially from the bronchial cough, and then acquires great importance when the diagnosis is obscure. "In each fit of coughing," according to MM. Hourmann and Dechambre, "the thorax is not convulsed by various consecutive efforts, preceded by a deep inspiration, as in bronchitis; but the cough is composed of one or more small, abrupt, convulsive jerks, without any previous inspiration." At the commencement, the cough has a clear, sharp sound, but soon becomes thick, and accompanied with a tracheal rattle.

Expectoration.—The pneumonic sputa presented by the adult are rarely met with in old men; expectoration is frequently absent, or else exists but for a few seconds at a time. In many cases, it is rapidly and abruptly suppressed. In 49 cases of *vesicular* pneumonia, the expectoration was sanguinolent 15 times. In 18 *inter-vesicular* pneumonias, the sputa were in but 2 cases streaked with blood. Thus, out of 67 cases, 17 only were attended with a sanguinolent expectoration. In 11 of these 17 patients, the disease was *acute* at its commencement; in 5 it was *latent*. When the sputa contain blood, their aspect presents several varieties; sometimes the blood constitutes the greater part of the expectorated matters. This *h  morrhagic* pneumonia is frequently observed in March and April; at other times, the sputa are formed of a thick, homogeneous substance, resembling pea-soup, and streaked with red; or else, they consist of grey flakes, more or less detached, in the midst of aropy mucous, with spots of blood on their surface. As the disease advances, the expectoration generally either ceases entirely, or else becomes purulent; sometimes, however, it assumes a uniform chocolate tint, or acquires the character of the *juice of prunes*. When the sputa do not contain blood, they are usually grey, opaque, greenish, &c. The transparent and viscous sputa are extremely rare; sometimes, white or greyish when expectorated, they in the course of a few hours change to a yellow or rusty colour. Thus we see that bronchorrhea, so habitual in old men, gives to the expectoration a special character.

C. General Symptoms.—In the first place, we observe in almost all cases of pneumonia in old men a *derangement of the intellectual faculties*; this most frequently shows itself at the period of suppuration, though not uncommonly in the second or even in the first stage of the disease. This derangement may consist in true delirium, either transient or continued; more frequently, there is merely a feebleness of the cerebral faculties, accompanied by a remarkable state of stupefaction and loss of memory. The countenance of the patient assumes a peculiar earthy expression; the nares become dry and obstructed, and seldom present that alternate dilatation and contraction to commonly accompanying dyspn  a in the adult.

Headache almost always exists where the intellectual faculties remain untouched; it is, also, sometimes combined with vertigo.

The Functions of the Digestive Tube are more frequently deranged in the course of pneumonia occurring in the old man than in the adult. These derangements consist either in obstinate constipation, or else in excessive diarrh  a, which is sometimes consecutive to the constipation. The diarrh  a most usually shows itself towards the latter period of the disease, and the employment of purgatives contributes, more than in the adult, to establish it in a permanent manner. The *tongue* is frequently dry and harsh, sometimes cracked in various directions, or else grooved into longitudinal folds formed by the puckering up of the dried epithelium; sometimes thick and pointed, at others wide and flat, it is of a uniform red colour, or else brown or blackish, covered with a dark fur, and the teeth and lips lined with *sordes*.

The four characteristic phenomena of the *febrile movement* in the adult, *force and fulness of the pulse, heat and moisture of the skin*, are very

rarely combined in the pneumonia of old men. The *pulse* at this age, to be considered morbid, should reach at least to 90 beats in the minute. Now, in a great number of cases, this frequency does not supervene till several days after the invasion of the disease, sometimes even not till the last stage. At other times the pulse, frequent at first, becomes afterwards normal, and this change has been observed at all periods of the disease; whilst in the adult it is usually combined with depression of the powers, and announces a fatal termination. The force of the pulse is even less constant than its frequency; it was small from the commencement in a great number of patients. The pulse is very often irregular in the pneumonia of old men, especially in the state of passive engorgement of the lung. Force and irregularity of the pulse may also possess real value only when watched in their development, since organic affections of the heart, so frequent in aged people, are ordinarily accompanied by this double phenomenon. Most frequently the skin is hot and dry, and it is only towards the approach of death that it becomes cold, and is sometimes covered with a clammy sweat. In certain cases, the skin preserves its natural state during the whole course of the pneumonia.

Continued fever, combined with the pneumonia of old men, may assume three principal forms: the *inflammatory*, the *adynamic*, and the *ataxic*. The *inflammatory* form is very rare; the *adynamic* is most common; but we must be careful in distinguishing this form from that disturbance of the nervous functions, often accompanied by diarrh  a and a dark-furred tongue, which is so frequently observed in the pneumonia of old men, otherwise progressing in a regular manner.

The true adynamic form presents, according to MM. Hourmann and Dechambre, two varieties. In the first, the disease is often latent at its commencement; but as it advances, the prostration of the patient increases, the intelligence becomes clouded, the muscular action and the pulse depressed, the skin is hot and dry, and *sordes* form upon the lips. The digestive tube sometimes remains unaffected in this form of disease. The second species of adynamic pneumonia is *essentially typhoid*, and differs remarkably from the preceding; it presents it is true the same symptoms, but the invasion of the disease is marked by angina, coryza, epistaxis, headache, vertigo, delirium, and such muscular debility, that the patient cannot keep upright, even when the inflammation of the lung has scarcely commenced. On the other hand, these symptoms of adynamia are almost always accompanied by disorders of the digestive tube: a tympanitic state of the bowels, diarrh  a, nausea, vomitings, either at the commencement, or in the course of the disease. The nervous system appears greatly affected: acute pains are felt in various parts of the body, especially in the calf of the leg and the heel; and the patient complains of the slightest pressure on the abdominal parietes. At the autopsy, we find collections of effused blood mixed with the hepatized tissue of the lung, forming that *pultaceous* condition, pointed out by M. Andral in typhoid fever. We likewise meet with extravasations of blood in the bronchial tubes, and deep and large ecchymoses in the cellular tissue of the body. The spleen is usually large, the liver gorged with blood, the intestines present various traces of inflammation as shown by the redness and softness of the mucous membrane and the enlargement of Peyer's and Brunner's glands. The brain is almost always found congested. This typhoid form of pneumonia is almost exclusively observed in the months of March and April, as has been noticed at Salp  tri  re. Finally, old men are not uncommonly affected with another form of pneumonia, which differs from that of the adult only in the slight intensity, or even the total absence of the general symptoms.

State of the Blood.—The state of the blood forms a great difference between the pneumonia of adults and that of old men. It is, in fact, but in the minority of cases that pneumonia is accompanied by a buffed state of the blood: out of 47 cases in which blood was abstracted, this condition existed only 17 times; and of these 17 individuals, the disease commenced in an acute

PHRENOLOGY AND INSANITY.

(Being a Paper read to the Phrenological Association at its Sixth and last Sitting, June 25, 1842.)

By J. G. DAVEY, M.D., one of the Surgeons of the Hanwell Lunatic Asylum.

(Concluded from p. 293.)

As one of the medical officers of the largest Insane Hospital in the world, my dissections of diseased brains are of course very numerous; and although in the majority of instances very evident marks of pathological change are to be observed either in the brain or membranes, (more generally in the latter,) yet we not unfrequently witness instances wherein it is quite impossible, with our *present means of investigation*, to detect the slightest abnormal appearance. This circumstance, however, by no means convinces us that no change has taken place; and though there may be, and are, cases of insanity in which the whole brain is unchanged, that is without *appreciable* morbid alteration of structure, and especially so in those cases of mania, the mere sequence or accompaniment of epilepsy, and wherein the disease assumes a paroxysmal character, yet nothing is more sure than that very much remains to be done concerning the minute pathology of the brain.

I think the cerebrum may be very properly compared to a musical instrument, which during health has no one note unbalanced by another. If we listen to the notes of a musical instrument, and perceive what is called the *pitch* of one note longer and louder, that is, *higher* than the rest, we immediately declare the instrument out of tune. Now this state would impart a character to the instrument by which it would be invariably recognised. To apply the allegory. Whatever the form of insanity, it is found that the disease is modified according to the organization of the brain; for the larger organ or organs being the most active, as a general rule it follows, that the cerebration must be influenced accordingly. In some instances it happens that a lunatic desires to conceal the indications of insanity, and to effect this observes an obstinate silence. The following case illustrates both the positions I have above referred to. A female patient, E. M., was admitted into Hanwell some six or eight weeks since. I visited her and commenced a conversation in order to ascertain the nature of her insanity. She preserved an inflexible silence, she would not even utter a monosyllable; of course I was very much perplexed. Her obstinate silence at one time disposed me to regard her deaf and dumb. As is the dractice at Hanwell, I made an examination of the head and was struck with a very marked disproportion in the size of the organs of Veneration; they were incomparably much larger than the other organs; so excessive was their size, that I became convinced of their agency in the case under consideration. I then asked her what religion she professed? She made no reply; yet I immediately perceived by the agitation of her countenance, and the expression of her eye, that I had found the right clue to the solution of the mystery. I inquired if she believed in the Trinity? She immediately raved out, exclaiming, "Christ was *her* only Son." Her conduct now became so maniacal, that I was obliged to desire the attendants to take her to her room. Some time since I happened to be doing duty on the male side of the house during the temporary absence of my colleague, Dr. Begley, and in passing down one of the male wards, I was particularly struck with the appearance presented by the posterior part of the head of one of the male patients. He was walking some few paces in advance. I inquired of the keeper who was near me, if the patient in front of us was not particularly dangerous and refractory? I told him I should suppose he was one of the most violent and unmanageable men in the establishment. Now, I had never heard of, or seen this man on any previous occasion. The fact of the matter is this, he is really the most unmanageable patient within the walls of Hanwell; his violence is such, that he has more than once kicked the door of his room piteously; and, if he were not properly superintended, he would do the other patients and his attendants most serious injury.

On another occasion I visited a male patient on

his admission, he was a gay and lively maniac; I examined his head, the organs of acquisitiveness were enormously large. I sent him into a refractory ward, and cautioned the attendants to keep all moveables out of his way, as the probabilities were he would be found a desperate thief. Some three or four weeks after this occurrence, I happened accidentally in passing through the male side of the house to come in contact with this man. One of the attendants of the ward reminded me of the injunctions I had sent them on admitting the patient, and told me that every word I had said had been verified. He declared it was impossible to prevent him from stealing everything he saw.

A medical gentleman, who shall be nameless, once asked me to examine the head of an insane person. At the same time he did not forget to jeer me about Phrenology. Adhesiveness, Conscientiousness, Caution, Benevolence, and Veneration, were all more or less full; Self-esteem very small; Hope small. I told my friend, I should suppose his patient was suffering from melancholia, and that it appeared probable that the cause of his affliction was disappointed affection. I added my belief in his general integrity of conduct and morals, and stated I presumed he was a respectable member of society when sane. The history of the man communicated to me by the gentleman above alluded to was this:—He was about to be married when some misfortune overtook him, and he was therefore compelled to sacrifice his engagement; the circumstance so distressed him, that he became melancholic. My friend has since said, he thinks there may be *something* in Phrenology. I think the recital of the above cases will be sufficient to prove the character which is impressed on insanity by the organization of the brain. As a further illustration I may, however, add two or three more cases confirmatory of the position here taken.—M. S., a female, is subject to paroxysmal mania, attendant on a severe form of epilepsy. The disease is characterised by a strong propensity to injure others: if during the excitement the door of her room be opened for any purpose, her countenance portrays the worst intentions. This person exhibits a large and broad basilar region, with very full Combativeness and Destructiveness.—H. A., a violent maniac, whose physical confirmation of brain is generally good, exhibits during cerebral excitement a great disposition to bite and otherwise injure her attendants. An examination of the cranium however reveals this apparent incongruity; the organs of Destructiveness are immensely large, and it is this circumstance which imparts to the abnormal cerebration its peculiarity. I could easily add to cases of this description numerous others were such required, and did time permit; however, by way of contrast, I will now direct your attention to three or four other cases, each one of which presents peculiarities the very converse of those just mentioned.

M. A., a female, about 34, many years insane. This patient is subject to occasional paroxysms of cerebral excitement, and is at this moment recovering from a severe attack. The kind of disease from which she suffers is so far unlike that which I have mentioned as peculiar to the previous cases, that instead of the symptoms being characterized by violence and a disposition to hurt others, they are rather indicative of extreme good-nature. The anterior and superior regions of the brain are comparatively larger than the interior and posterior.—S. C. F., another female patient in Hanwell, attacked with occasional paroxysms of acute cerebral excitement, has also the external manifestations of it similarly modified by the physical conformation of the cerebrum; in this woman the organs of Gaiety are full, and assume not unfrequently at these particular times a very exalted action, imparting a very peculiar feature to her disease. Acute cerebral excitement, commonly called *mania*, I have observed to consist in intense mental suffering and anguish, expressed by a keen desire for solitude, and an insatiable longing after means of self-destruction. The patient, S. C. (now in Hanwell and comparatively well), when in seclusion in her room, walked to and fro, and up and down, with a restlessness and agitation better conceived than

described; her countenance at this time assumed the most abject misery, it was shrunken and cadaverous; the surface of the body was cold, the pulse quick and feeble. This patient had suffered from ordinary melancholia for some time previous to the severe attack I have just attempted to describe; and I can see no other way to account for the peculiar symptoms with which it was attended, than by supposing that the particular parts of the brain more immediately concerned in the development of the first symptoms of cerebral disease, took on, from some cause or other, an increased morbid activity, the consequences of which were as we have seen. Those who maintain that *mania* is the effect of pure inflammatory action, will find this case puzzle them not a little.

That form of cerebral disease known by the name of melancholia, I always find accompanied with an organization too invariable to even allow an attempt to disconnect them, that is, to do otherwise than consider such in relation to each other as cause and effect. For in the cases of S. C. (the patient just above quoted), of S. B., of R. L., and M. A. G., all female patients in Hanwell, not only is the conformation of the cerebrum alike, but the diseased manifestations in each have one common character, that is to say, the organs of caution in them all are very large, those of Self-esteem deficient, with those of Hope more or less small, when considered in relation to the other parts of the brain; they are, too, all suffering from what the present nomenclature distinguishes as melancholia. When, however, all the forms and modifications of diseased cerebration are recognised only in connection with correct physiological views, this term and the others in general use, which are no less objectionable in a scientific point of view, will necessarily be dispensed with, and such others employed as shall do something more than merely express one of the mere external features of disease. For instance, very many different abnormal conditions of the eye and ear are attended with either blindness or deafness; pathologists, however, are not content to recognise all such by one general appellation. The case of R. L., spoken of above, presents a very interesting feature, apart from what has already been explained; thus, the organs of Conscientiousness and Acquisitiveness are both very large, and their functions are very beautifully balanced, inasmuch as, whilst she is seen during the whole day collecting every little thing of the most trifling value and bestowing on her hordes the greatest care, she is most scrupulous lest she should by any chance appropriate to herself any little thing, as a pin, or a piece of thread, &c., which may happen to belong to any other person. This patient some time since positively refused her food, because she said it was wasteful and extravagant to eat so much when at the same time so many thousands were wanting it out of doors. This idea, no doubt, resulted from a morbid activity of conscientiousness influenced by acquisitiveness.

About three months since a very interesting case was received in Hanwell, that of a female patient, V. D., whose only peculiarity was an intolerable propensity to talk. She in fact talked the twenty-four hours round without stopping, to the extreme annoyance of both her attendants and fellow-patients. I repeatedly asked her why she talked so continuously? She replied she could not help it. Her conversation was not at all incoherent, and all she said was most proper and correctly expressed. Her health was very good. Now, this woman has the organs of Language very large, which is of course indicated by great fulness of the eyes. How else shall we account for the very singular feature presented in this case, than by supposing the patient to have laboured under a morbid excitement of these particular organs? She is now quite well, and when questioned respecting the propensity she so strongly manifested, still replies she could not help it, and at the same time asserts that although she did talk so much, she never spoke nonsense, and that she was never mad, for she well knew what she was about.

In connexion with the subject of my paper, there is nothing more important and interesting than the consideration of those means by which we are enabled to anticipate a predisposition to suicide in

insane patients. Every one at all acquainted with their management is aware that such cases are the source of a perpetual and wearisome anxiety; and however true it may be that the improved system of treatment now pursued towards the lunatic will very materially lessen the absolute number of suicidal cases, yet nothing is more sure than that so long as the inclinations of both sane and insane must yield to the necessities of their organism, so long will cases of this description occur; hence the importance of detecting such will be sufficiently apparent. On this point, however, I am unable at the present time to say anything satisfactory; I am at this moment engaged in collecting facts, and the little I am disposed to consider myself prepared to say, might by-and-bye be found contradicted by subsequent investigations.

In considering both the healthy and diseased function of any organ, I need hardly add, neither should be done irrespectively of the due consideration of those sympathetic actions which so constantly manifest themselves; for "all are parts of one stupendous whole," being united by one common power, the same as beads on a skein of silk. Deranged action of the abdominal organs may and do develop a melancholia, which can be cured only by means directed to the removal of its cause: to seek in the condition of the brain alone for the nature of the disease would be foolish indeed. In a paper read before the Association last year by Dr. Otto, of Copenhagen, the author directed attention to the existence of very peculiar and well-marked sympathies between not only the brain, and the other bodily organs, as the liver, lungs, &c., but also between the different parts of the brain and the other viscera. Dr. Otto, I may add, by way of illustration, mentioned the influence exerted over the organs of Hope by organic disease of the lungs; and the opposite effects of deranged liver on the affections are too well known to require illustration. (In reference to facts such as these, we recognise the operation of a principle,—which obtains, it must be remembered, both in the healthy and diseased states of the body,—deserving our best attention, a knowledge of which will prepare us to expect the occasional existence of diseased function of the brain of a particular character, in cases which the cerebral conformation alone would have prepared us to expect the very converse.) And, in connexion with this division of my subject, it should be stated as a fact, in every way deserving our best consideration, that disease of the brain of an inflammatory or other nature may be partial. If we imagine disease located in a portion only of the brain, and that portion relatively smaller than other organs, we must expect an exaltation of function, not only incompatible with its size in a state of health, but disproportionate also to the natural greater activity of larger organs. This view is fully borne out in every department of Pathology in the diseased conditions of our whole organism.

To conclude:—The vast importance of Phrenology to society, the inestimable blessings which must result from its extension, the great good which must attend on the adoption of its principles, can in no way be better appreciated than by reviewing the gross ignorance of those whose studies require more of them: by reviewing, I say, their ignorance of Phrenology, in connexion with its sad results. Look to our criminal code—look to the doings of our courts of law—mark the opinions expressed by our greatest judges. How little is there in all this which savours of truth! How little of that "divine trusting on" which marks the very nature of man! Where in all this shall we discover the recognition of a single fact, save that of error? Again, how deeply must we deplore the absence of all sound views of human nature! How much lament the existence of practices based only on the folly of our ancestors!

Is it not horrible, is it not disgraceful to us, who call ourselves a civilized people, to reflect on the many insane individuals whose lives have been sacrificed on a scaffold; who have been hanged to glut the ire of a depraved animalism? Am I doubted when I say that many lunatics have been murdered by the laws of this great country, as it is called? If justice, and honour, and wisdom, make a country great, I fear Britain does not yet

deserve the appellation. If she would win the prize, her legislators must seek out the cause of human improvement, must frame laws in accordance with human physiology. If a horticulturist were desirous to cultivate some favourite exotic, he would of course seek out a knowledge of the soil, temperature, &c., which the plant or flower required; and if he neglected such a precaution, he of course would expect its leaves to wither, the beauty of its colour to fade, and its form to waste; a diseased plant would then be substituted for a healthy one, if it happened to survive. Man survives 'tis true, he so far braves the polluted atmosphere he is made to respire, the unwholesome temperature which surrounds him: but mark the consequences—his body is diseased, his cerebration abnormal, and he transmits the elements of a depraved organism to his successors. Nature does, indeed, punish those who err, at the same time, however, she blesses those who do not err.

Until a knowledge of the healthy function of the brain supplied us with a knowledge of its diseased manifestations, insanity was considered only in connexion with the understanding, with the intellectual powers; as if the affections were without the reach of disease, as if the affections were immaterial. Blakesley who, some months since, was hanged at Newgate, was said by some to be insane. The question was decided in the negative. But by what aid? The light of Phrenology? No; not one of the parties concerned understood its principles. Would the evidence of that chemist be taken who, in a case of suspected poisoning, had omitted the employment of the requisite tests? Certainly not. Who, in the name of fate, then could be supposed competent to decide a physiological question, if ignorant of this science? Let the legal profession see to this.

Phrenology plainly points out the inconsistency of such proceedings; it also calls aloud for the adoption of a new and improved system of education, which by anticipating predispositions to crime adopts the only plan of prevention, and so gets rid of the idea even of brute punishment altogether.

Lastly, to the science of Phrenology we are indebted for a knowledge of those means which enable us to apply to the several cerebral organs their appropriate stimuli, both as regards quantity and quality, and so avoid a fertile cause of disease of the brain, of, in one word, insanity, and when insanity does occur, it alone enables us to properly understand its nature or treatment. No Medical Curriculum is complete without a course of Lectures on Phrenology. The Lunatic Asylums about the metropolis should be made schools of this particular branch of medicine, where Medical Students should be instructed, both theoretically and practically, in the Physiology and Pathology of the brain. At Hanwell, an example has already been set; the medical officers of other similar institutions have but to follow in the path of Dr. Conolly.

EXTRACTS FROM FOREIGN JOURNALS.

(For the 'Medical Times.')

ACADEMY OF SCIENCES.

Phthisis in Man and Animals. M. Rayer read a paper on the above subject, in which he arrives at the following conclusions: 1st. Tubercular phthisis is, of all chronic maladies, the most general in the human race as well as in animals. 2nd. In man and other mammifera, tuberculous matter may be easily distinguished from recent pus, which is always loaded with well-formed globules. In birds, the characters of tuberculous matter are less defined. Foreign bodies introduced into the lungs or elsewhere, do not give rise to a white, opaque humour, filled with globules, but to a dry yellowish matter, devoid of the globular character, and whose physical characters approach to those of tubercles in the mammifera. In reptiles, fishes, and insects, the characters of tubercles are still less distinct. 3rd. Pus in the mammifera, especially the horse, experiences, after prolonged detention in the organs, successive transformations and sometimes eventually assumes the appearance of tu-

berculous matter. 4th. Pulmonary tubercles in man and the quadrumani have generally a grey tint; in the cow, tuberculous matter has usually a chamois-coloured yellow tint. 5th. In man and animals, the central ramollissement of the tubercles cannot be attributed to inflammation; globules of pus are never found there. The outer ramollissement of the tubercles is on the contrary, most frequently favoured by inflammation of the surrounding tissues, and is almost always mixed with globules of pus. 6th. The yellow matter which we find in the hydatid cysts of ruminating animals, has some analogy with tuberculous matter; but the cysts filled with this yellow matter almost always contain the debris of the hydatid sac, and sometimes a certain quantity of pus. 7th. The cretaceous or calcareous concretions (principally composed of carbonate and phosphate of lime), which are sometimes observed in the lungs, cannot be considered as being almost always an ultimate modification of tubercles; they are very frequently the remains of a small deposit of pus. 8th. In many animals, granulations containing worms are formed in the lungs, and, as the result of glanders, which in the general study of granulations, should be distinguished from those of a tuberculous character. 9th. In the quadrumani and some birds transported from hot countries to our own climate, the development of phthisis is excessively frequent, almost to the exclusion of other chronic diseases. It is equally favoured by the change of climate and diet in other animals coming from the north, and especially in the rein-deer. 10th. Phthisis, rare in domesticated quadrupeds, is still more uncommon in carnivorous animals; still, in spite of the preservative influence of a strong constitution and of an animal regimen, many carnivorous animals, the cat, and especially the lion, the tiger, &c., when transported to our climates, may be attacked with pulmonary phthisis. 11th. By a kind of opposition, the domesticated dog among carnivorous animals, and the horse among quadrupeds, are less subject to tubercles than to cancer, a disease which used to be regarded as foreign to animals. 12. In the ruminantia, especially the ox, phthisis is often associated with hydatids, and especially with the cchinococci; but contrary to a commonly expressed opinion, there is no relation of transformation or succession between the hydatids and the tubercles. 13th. Fatty degeneration of the liver commonly accompanies phthisis in man, and general obesity in birds. 14th. The alterations of the bones observed in monkeys affected with tubercles; and especially in those of the new continent, appear similar to the deformities, swelling, and spongy softening of the bones in phthisical and scrofulous children. We observe a similar condition of the osseous system in the carnivora of hot climates brought to this country. 15th. If the frequency of pneumonia and the rarity of phthisis in the domestic dog seem to indicate a want of relation between these two diseases, we no longer find this condition in the cow or the she-ass when giving suck, for in them the deposit of tuberculous matter almost always coincides with a chronic and progressive pneumonia. 16th. Phthisis is hereditary, but it is scarcely ever congenital, even in the rudimentary state. 17th. In phthisical patients the semen contained in the seminal vesicles presents few or no spermatie animalculæ. 18th. Ulcers of the larynx, the trachea, and the bronchi, have not the same meaning in man and in all animals. In the former, they almost always indicate pulmonary phthisis, and sometimes syphilis; in the quadrumani a general tuberculous affection; in quadrupeds almost always the glanders. 19th. In pneumo-thorax, small vegetations are sometimes formed upon the diseased pleura, in

the same manner as we occasionally see them developed in the air-sacs of tuberculous birds. In these cases the development of this class of living bodies is always a *secondary* phenomenon. M. Rayer terminates by some general considerations as to the elements concurring in the formation of pulmonary phthisis in man as well as in animals; a preponderating cause in the production of tubercles in animals, is the state of captivity or domestication, and, most generally, a *remarkable and prolonged change in the natural mode of living*. This cause may, from the intensity of its operation, be compared to bad conditions of food and lodging which, in man, so energetically determine tubercular phthisis. *Captivity and domestication* in animals, *misery and fatigue* in man, form the efficient causes of phthisis.

Structure and arrangement of the deciduous membrane.—M. Coste read a second paper on the utero-placental deciduous membrane. Some authors assert that there is no maternal placenta in the human species, and suppose that there exists between the womb and the foetal placenta merely a thin layer as a species of protection against the too immediate contact of the ovum. But observation does not confirm this opinion. M. Coste has seen, in the wombs of three women dying at different periods of gestation, an arrangement exactly similar to that described by Hunter as the placental sinuses. He has also ascertained that the numerous vessels passing from the uterus to the foetal placenta are carried along by the uterine deciduous membrane which is prolonged into the interior of the latter, and whose substance, being as it were hypertrophied, forms with the foetal villousities of the chorion a true maternal placenta. The following are his conclusions: 1st. That the uterine deciduous membrane constitutes, with the membrane which lines the external surface of the placenta and which penetrates into its substance, one and the same structure, since these two portions are directly continuous one with another, and that the same vascular apparatus forms within their interior a system of special or peculiar character. 2nd. That the uterine deciduous membrane, existing as perfectly between the placenta and the womb as elsewhere, forms around the ovum a complete investing tunic. 3rd. That it constitutes, with the villousities of the chorion, the net-work of the sinuses which contribute to form the placenta, since it maintains these villousities united together after the manner of a honey-comb; and consequently, we must admit the existence of a maternal placenta, the portion of deciduous membrane forming it being attached by continuity of tissue to the womb, and prolonged along the vessels from the mother to the foetal surface of the placenta.

The President announced to the Academy the death of M. Pelletier, one of its members.

THE MEDICAL TIMES.

SATURDAY, AUGUST 13, 1842.

— but now they rise again
with twenty mortal murders on their crowns
And push us from our chairs. —MACBETH.

DR. ROBERT BENTLEY TODD is a good Physiologist, and a Comparative Anatomist of no common excellence. He has already done much for the division of science; he has cultivated, and we expect yet more from his rare industry, and—for

“in spite of man—in erring reason’s spite,”
we dare to claim them for him—from his solid

abilities. But why will he invite suspicion on his abilities by *toddling* far out of his own, his appropriate walk? The man of one department—watchful of his reputation, if wise as clever, does not rashly run his head against the old Roman rule—*ne sutor ultra crepidam*. But Dr. Todd is young; he saw in danger the hospital of pestilence and death, whose aids to his researches were to him its everything—the Watsons—the Budds—the Physicians, in truth, whose pursuits taught them the influence of animal miasma on human frames—had no word to say in its defence, and the Comparative Anatomist, in the eagerness of his untamed enthusiasm, sallied out like another Ajax, to defend that which had been given up by the Ulysses and Agamemnons of the camp. Alas! that daring is not everything in the fields of science; Dr. Todd has returned with tarnished helmet and fallen crest from the daring melee; and even Sir Robert Inglis and Principal Lonsdale are without a congratulation for a hero—their ultimaspes—who has returned not only beaten but dishonoured.

The Comparative Anatomist of King’s College—the only witness produced by it to defend the position of their hospital—gives the following as *his* doctrine of fevers. “Typhus fever, I believe to be propagated from a poison generated in the human body, in the living body, which is communicated by immediate contact with, or close contiguity to, the parties affected, or by communication with their clothes, or any ordinary articles of clothing or covering that may have come in contact with the bodies of the deceased.” If we would have this more particularly explained, we have only to turn to the letter of the Medical Committee to Mr. Baron Gurney, where it is declared that the specific poison causing typhus or typhoid fevers (which Dr. Todd, the able *anatomist*, considers identical) is generated in the body of a person affected with the disease, and NO WHERE ELSE.

The Professor of King’s College, believing, of course, that

“Le meilleur Amphytrion est l’Amphytrion ou l’ontdine,”

follows up his fortunately self-favourable doctrine in the following self-favourable way. “I can state that *no inconvenience whatever* has been felt from the contiguity of the grave-yard; I am quite certain that no disease has originated or been aggravated; nor has anything of the kind happened from the contiguity!” “The gases from human decomposition, when brought to act on the animal frame, produce effects *very different* from the ordinary symptoms of typhus fever.” “The ventilation affords to the hospital by the grave-yard underneath is certainly a greater advantage to the patients than the presence of any *effluvia* is an evil; it gives a good large volume of air. I SHOULD BE *very* SORRY INDEED TO SEE THE BURIAL-GROUND REMOVED.”

What a splendid witness is Dr. Todd!

His testimony “goes the whole animal” delightfully. If we should be ever entangled in the meshes of the law, may Heaven in its kindness send us Dr. Todd for a witness—in *our* favour!

We shall now cite a few opposing opinions; the only objection that can be made to our authorities being, that they are not merely anatomists, and having some sympathies with humanity, have no special interest in the preservation of such a hospital as that of King’s College. We make, however, one exception, for we quote first Dr. Todd himself. “When the hospital was first opened, he says I heard some vague complaints of an unpleasant effluvia, but I apprehend that that was more arising from fancy, arising from persons resident in the hospital, than anything else. They complained of smell, which *they perceived* in the lower part of the building; for the last year and a half I have not heard of any such complaints.” For a year and a half (the hospital has been now instituted three years) the inmates complained of, *perceived* unpleasant effluvia arising from the dead buried under the house and under their noses; the ground being, as Mr. Walker tells us, “*saturated, absolutely saturated* with human putrescence,” the bodies lying often within a foot and a half of the surface;—and yet Dr. Todd, a most admirable witness, tells us that he can tell the committee that no inconvenience whatever has arisen from the positively *agreeable*, the incalculably *useful* contiguity!

“What obvious truths the mightiest minds may miss,”

especially if, blinded by a bad ambition to please, or worse, the *auri sacra fames*!

We must make one other exception—it is Dr. Watson, the learned colleague of Dr. Todd, and Lecturer on the Principles and Practice of Medicine. We have quoted a recently published passage from him in another page, which completely putting the extinguisher on Dr. Todd’s *medical* notions, teaches why Principal Lonsdale supplied the Physician’s place before the Committee with a Comparative Anatomist! The next witness shall be Dr. Copland, one of our Physicians, in whom common sense, great experience, and high erudition combine in an eminent degree to make an irrefragable authority. In his Dictionary, page 994-5, speaking of continued fever, he tells us, “In many places exhalations from dead animal matter concur with those proper to those of the soil, and its productions, in causing fever. Water loaded with decaying animal or vegetable matter, and the effluvia from putrefying animal matter, are frequently productive, particularly when conjoined, of continued fever, which often assures a gastric or enteric character; and he adds, that the predisposing causes of synchoid and typhoid fevers are the same. “Animal masses, from having living persons shut up in one place, will have,” he says, “the same effect. Fevers produced by palu-

dial miasms, or by infections, emanations from living or dead animal matter, are universally preceded by well-marked symptoms. In these fevers, a poisonous agent has infected the frame, and more or less depressed its energy, as they are manifested in the organic nervous system." He tells us, in page 1006, what will be news, we suspect, to Dr. Todd, though well known to his discreeter colleagues:—

Indeed, there is no variety of fever that may not evince a septic or putrid state—1st, from the vital depression produced by the exciting cause; 2dly, from exhaustion consequent upon vascular reaction; 3dly, from the passage of contaminating matters into the blood; and 4thly, from these states conjoined. Hence, when the causes are of a contaminating kind, and the influences continuing to operate after infection have a similar tendency, putrid or malignant symptoms will arise, whether the fever be synchoid, nervous, typhoid, or gastric, in its early periods. These fevers are the most prone to the septic character; but others, as remittent, inflammatory, and bilious fevers, may also assume it. This particular character may, or may not, be developed, or may appear at a later or earlier period, owing to the nature and diversity of the causes; to the condition of the internal functions and of the circulating fluids at the time of attack; to the rigidity or tone, or to the laxity, of the softer solids; to the violence or absence of vascular reaction; and to the early treatment and regimen.

He adds, that the morbid emanations from animal putrefaction will not only produce typhoid fever with the putro-adyamic characters, but that the malignant fever so generated, *de novo*, will have the power of propagating itself by means of its own emanation—a doctrine at once established by common sense—and all the teachings of experience. We shall conclude with Dr. Copland for the present, in giving these three opinions expressed by him before the Committee.

One can scarcely read Sydenham's accounts of the epidemics that prevailed after the great plague in 1665 and 1666, without being struck by the circumstance of the fevers, and in fact of the diseases, generally epidemic, for some years afterwards, having been chiefly caused by the emanations proceeding from the number of bodies put into the earth during the plague.

Again,—

In the exercise of my profession during the rather more than 20 years I have been in practice in London, I have always made it a principle, if I was called to a person labouring under disease in the neighbourhood of a burying-ground, to advert to the circumstance, and to advise removal into the country as soon as was consistent with the power of the individual to remove.

Lastly,—

The malignant or putrid fever caused by the emanations from animal matter, sometimes mixed with vegetable matter in a state of decomposition, varies in its characters with the causes producing it. If the emanation from the dead proceeds in a very concentrated form, and is inhaled by a healthy person, it will affect the frame through the medium of the lungs and the circulating fluids, and the person may die in a very short period; this very malignant form of fever not materially perverting at the

same time the mental faculties; but even in an early stage in typhus the mental manifestations are overpowered, and are entirely annihilated long before dissolution. Again, if in connexion with emanations into the atmosphere, the individual drinks water that is imbued with animal matter, the character of the fever will be then changed; it will then present, in connexion with more or less disposition to putridity, or, in other words, to dissolution of the fluids and the soft solids of the body, marked disorders at the same time of the stomach and bowels, giving an enteric or dysenteric character, or a gastric form to the malady.

Dr. Lynch, after speaking of a lady who had typhus fever six times, from her proximity to a dissecting-room, says—

In dissecting myself at La Pitié, at Paris, I had the same complaint that young students often complain of, viz., diarrhoea in the first instance, and after I got better I had typhus fever itself, which I attribute to the noxious exhalations of the dead bodies. I had a cousin, a member of the Royal College of Surgeons in Ireland, three times he was attacked with typhus fever, and by repeated attacks the system was so altered, he had a malignant carbuncle, and with the greatest difficulty his life was saved. Putrescent animal matter will produce typhus fever, as has been mentioned by Dr. Copland; not only has Hippocrates stated that, but every great medical authority from before the birth of Christ to the present time. The celebrated Dr. Cheyne, Dr. Percival, Dr. Armstrong of the present day, Dr. Southwood Smith, Dr. Roupell, Dr. Elliotson, Dr. Lewis, Dr. Tweedie, Dr. Stephens, Dr. Clanny, of Sunderland, and thirty medical practitioners in daily attendance on those affected with disease, were examined before the former committee on the Health of Towns; they all agreed on the origin of this disease, referring it distinctly to putrid animal matter. I have noticed, having specially directed my attention to it, that the way they become affected is, that they breathe or inhale an atmosphere surecharged or impregnated with those deleterious matters, which are not visible by the eye, into the lungs; they mix with the blood and affect the whole frame.

Sir Benjamin Brodie, whose authority on this subject is worthy of all acceptance, tells us—

In the first place, the gas which is evolved from putrid bodies is chiefly sulphuretted hydrogen, which is so noxious a gas that the admixture of one part of it with 500 of atmospheric air is almost immediately fatal. The admixture of this gas alone must be, of course, injurious to health; but I apprehend something escapes from the bodies besides the sulphuretted hydrogen, for the gas has a peculiar odour, as if it carried some kind of animal matter or poison with it. Sulphuretted hydrogen, if mixed with atmospheric air in the proportion which I have mentioned, destroys life immediately, by acting on the nervous system; but if it be more diluted the effect is not immediate, and it produces some kind of fever, what is generally called typhus, or putrid fever. Some years ago I recollect there were some sewers opened near Manchester-square, I think in very hot weather in summer, and the stench from those sewers was smelt by persons going by for a considerable time, and I understood that the result was a fever, which destroyed a good many lives in that district. I recollect once when I had a patient on whom I performed an operation, it so happened that the night after the operation some sewer gave way, or some pipe gave way, and there was a horrible stench

in the house; a young professional friend, whom I had left there, told me this in the morning, that the stench was such that he could hardly sleep; the nurse and housekeeper were both taken ill; one of them died, and the other very nearly died; the patient died also; and I was led to believe that he died partly in consequence of the effects produced by the escape of this noxious effluvia.—From what you have stated you are of opinion that this effluvia, arising from putrid matter or decomposed bodies, where there is any predisposition in the subjects, is certain to produce disease; but in cases where a person is in perfect health, he may pass over it with impunity?—Yes; it is with those injuries as it is with mechanical injuries; the effect depends partly on the cause that operates, and partly on the subject on which it operates. One man may get a scratch in the leg, and it may be nothing at all; but let a dram-drinker get such a scratch and it may kill him. So a man in strength and health may be exposed to a poison and not suffer, while a man in very weak health will be killed; that is, persons in one condition of the system resist the poison, while in another condition of the system they do not resist it at all.

Dr. Chambers, to whom Sir B. Brodie refers us, as an admirable authority on this subject, says—

I have no doubt, whatever, that the fevers which are called typhus, even in this cleanly quarter of London, owe their origin to the escape of putrid miasmata from sewers, drains, and similar sources of pollution. I should presume that overcrowded burying-grounds would supply such effluvia most abundantly.

To complete the refutation of Dr. Todd's evidence on every point, from the very best authorities, we shall now see what Christison and Majendie tell us on the subject of fevers and animal malaria. In Christison on Poisons, pages 555 and 556, we read thus:—

Putrid animal matter, when injected into the veins of healthy animals, proves quickly fatal; and from the experiments of Gaspard and Majendie, together with the more recent researches of MM. Leuret and Hamont, the disease induced seems to resemble closely the typhoid fever of man. Similar effects were observed by Majendie, when dogs were confined over vessels in which animal matter was decaying, so that they were obliged always to breathe the exhalations. These discoveries throw some light on the question regarding the tendency of putrid effluvia to engender fever in man; and notwithstanding many well-ascertained facts of an opposite import, they show that, probably in peculiar circumstances, decaying animal matter may excite epidemic fevers. A detailed investigation of this important topic would be misplaced here, as it belongs more to medical police than to medical jurisprudence; but the two works quoted below are referred to for examples, in my opinion, of the unequivocal origin of continued fever in the cause now alluded to. The effects of putrid animal matter when applied to wounds have been investigated experimentally by Professor Orfila, who found that putrid blood, bile, or brain, caused death in this way within twenty-four hours,—producing extensive local inflammation of the diffuse kind, and great constitutional fever. In man also several instances of diffuse cellular inflammation have been observed as the consequence of pricks received during the dissection of putrid bodies. The disease as, formerly observed, certainly arises in general from pricks received in dissecting recent bodies.

At the same time, a few cases have been traced quite unequivocally to inoculation with putrid matter; and if any doubts existed on this point, the experiments of Orfila would remove them.

Majendie's opinion, we quote from Mr. Walker:—

This Physician, seeing that the putrefaction of animal and vegetable matter produced a poison which had the most injurious and fatal effects upon the human body, and which, during the state of decomposition, and under circumstances which produced it in a high state of concentration, was, on a single inhalation, capable of instantaneously causing death; and that, even when diffused in the atmosphere, and spread over a large extent of country, it was the fruitful source of disease and death,—seeing the vast number of facts which had collected, requiring only a single and simple experiment to connect them, demonstrated, beyond the possibility of a doubt, that the poison in question was caused by animal and vegetable substances, in a state of putrescency,—by cold and other agents he condensed it, and found that by applying it to an animal, previously in good health, he destroyed life with the most intense symptoms of malignant fever. Ten or twelve drops of water, containing this matter, were injected into the jugular vein of a dog—in a short time it was seized with acute fever—the action of the heart was inordinately excited—the respiration accelerated—the heat of the surface increased—the prostration of strength extreme—the muscular power so exhausted that the animal lay on the ground unable to make the slightest movement; after a period it was seized with the identical black vomit, so characteristic of yellow fever, and what is still more remarkable, is the fact, that by varying the intensity, or the dose of the poison, he could produce fever of almost any type—endowed with almost any degree of mortal power;—when diffused in the atmosphere, this poison taken into the lungs, or absorbed by the larger surface of the skin, enters the blood, and produces diseases of varying malignity, modified as the producing causes be of animal or vegetable origin; thus, when the effluvium from marshes, or decayed vegetable matters was employed, intermittent fever (as ague) and remittent fever was produced; but when that from animal matter was experimented with, typhus, and the order of fevers marked by a diminution of power in all the functions of the body, and a general disposition to putrescency, both in the solids and fluids, invariably followed.

We conclude here with the subject unfinished: we have, however, adduced enough to warn Dr. Todd of the danger to a man of science—aye, and let us own it, standard science—giving opinions on a subject he knows nothing about: may it also be a useful warning to the community!

We last week drew attention to the necessity of having medical men in Parliament. Our French brethren, sharing apparently our conviction, and preceding us in the practical good, have succeeded in introducing to the Chamber of Deputies FIVE medical men. Their names are,—Drs. Boulland, Terme, Dezeimeris, Richard de Brus, and Delareau. The celebrated M. Gerdy failed to be returned only by a few votes. M. Borulland has already given notice of some important sanatory motions, and has been promised the strongest support from his zealous colleagues. Let us hope that our exhortations, thus seconded by the authority of so respectable and *exciting* a precedent, will

find an echo in the hearts—a response in the exertions—of our medical brethren at home.

MEDICAL REFORM.

REGISTRATION—ELECTION OF HEADS IN PROFESSION, &c.

ALL persons, on receiving their diploma to practise, should be registered in the order of their respective dates of passing the final examination, and should receive a proper, duly signed, and sealed, certificate, or diploma.

It should also be required that an *annual* registration be made of all persons qualified to practise, with their respective christian names and surnames, with their places of abode, and, if desired, their honorary titles and distinctions; and that lists should be printed under the authority of the central council of the profession, and given to each practitioner upon being required so to do. That this registration should have legal force, and upon a person proving himself to be the individual therein named, he should require no further evidence of his qualification to practise.

The machinery of such an annual registration should be as follows:—A registrar should be appointed for each county, who should keep a book in which, by a certain fixed day, week, or month, in each year, he should see that each member signed his name and place of abode. At the first registration of any practitioner he should be required to show his diploma, but having received a certificate of having been registered, the production of such diploma should not be in future required. Within a month of the time of the district registration being effected, the registrar should transmit his list to the central council, by whom a complete list of members qualified to practise in England and Wales should be made out and printed, and that, too, by a certain definite period in each year. The registration of the preceding year to be in force until the next list be published. Such a registration, it will be seen, is necessary as a preliminary to all elections.

The administration of the affairs of the medical profession comprises the control of the finance department; the registration of practitioners; the conduct of elections; the appointment of examining boards; and the forms and character of the examinations. Hence these affairs must be committed to the direction of a central board or council, to be elected out of the general body of the practitioners of medicine.

It is not a concession to the feelings of our profession, but a right inherent in it, that the election of such a council should be popular and unlimited; in other words, that each person who has qualified himself to practise should be entitled to vote for the appointment of councillors, and himself be eligible to become a candidate for such office. The only restriction of the latter right which it would be prudent to make, would be the attainment of a certain age, say thirty years, and as of necessity the sittings of such a central board must be in London; the members thereof should be required to reside in or within a certain definite distance of the metropolis.

Suppose, however, that the council be limited to thirty-six or forty-eight members of whom ten or fifteen should vacate their seats annually, and not be eligible for re-election until after the expiration of twelve months, it would follow that an annual election of ten or fifteen councillors must take place by means of an enormous constituency, and one spread over the whole surface of England and Wales.

Supposing, also, that the form of election were by printed lists of candidates forwarded to

each elector, the registrar requiring him to return it to scrutineers, signed, and with the names of the proper number of candidates clearly designated by him; still the vast bulk of the constituency would give rise to serious difficulties, and the qualification of candidates would, in the great majority of instances, be wholly unknown to the electors. Hence the choice might often fall upon the least eligible candidate, and chance too much operate, where prudence and judgment ought alone to prevail. Is it not possible, however, so to constitute the machinery of the elections as to obviate many of the difficulties, without dispossessing them of that character of freedom and popularity which ought to be the basis of all representative bodies? I think it is, and to that point I would invite serious attention.

1st. A registrar should be appointed in each county to collect annually the names and residences of all persons licensed to practise, and therefore to vote within their respective districts.

2nd. The licensed practitioners of each county could elect triennially three or five persons to act as a district council, resident in the principal town of each county. This council should act as the representatives of the practitioners in the election of the central and grand council of the profession; and it will hereafter be shown that other and important duties, conducive to the welfare of the profession, would devolve upon the district councils.

Thus, 1st, each licensed practitioner would be represented primarily by his proxies in the district committees, and this election would be wholly and entirely popular.

2ndly. It is more than probable that the persons appointed as proxies or district committee men, would be elected from the most eminent and respectable practitioners of the county towns; and it is at least certain that the character and qualifications of the candidates for this office would be generally well known to their brethren of the respective districts.

3rdly. The persons elected being, it is presumed, the most upright and eminent men resident in the provinces, would feel they held a responsible position in the right of voting for the central council, and would undoubtedly be in a better position, from their standing and more extensive acquaintance, for examining into and judging of the qualifications of candidates for the metropolitan council.

4thly. The number of actual voters for the central board would be reduced to between three hundred and three hundred and fifty* at the most, and greatly facilitate from their comparatively small numbers, the labour and certainty of the most important of all the elections. The mode in which these elections might be conducted is by no means difficult.

The county registrars should print a list of candidates for the district committees, and send such a list to each practitioner within his limits. This list should be returned by a certain fixed day, with the number of the names (say three or five) selected, and the paper signed by the elector. His signature being compared by the registrar with the signed registration-book, and found to agree, the votes would be cast and the election declared.

The same form might be adopted in the elections of the central board; the constituency, however, being in this case the district committees,† acting as proxies of the general body. In such a manner a fair and populous election would be secured, and at the same time an in-

* In London, boroughs might take the place of counties, I suppose.

† The district committees to consist of a number of men proportioned to the number of voters.

telligent and cautious selection of candidates effected.

The appointment of district councillor would be sought for as an honourable distinction, while the trust reposed in him by the provincial practitioners would ensure the necessary responsibility, seeing that their selection would mainly depend upon the manner in which they had executed their several functions.

[We quote the above from a weekly contemporary. It is written evidently by Dr. Marshall Hall. A more monstrous piece of classified and carefully arranged nonsense never came from a man of education. Triennial district elections of proxies, and triennial election, by those of the heads of the profession—two standing armies of elective assemblies in one profession! We have in this a picture of a state of things which infinitely absurd, is, to speak Hibernice, but one shade better than the misgovernment we now submit to. The evils of endless squabbles and dissensions, an imperium in imperio, anarchy within anarchy, would be but a few of its disadvantages.—ED.]

THE DOCTRINE OF FEVERS.

By DR. WATSON.

To say that a febrile disorder is contagious, is the same thing as to say that it is produced by an animal poison. Now there are many poisons, very deadly poisons too, which cause diseases that are not communicable from person to person. That particular poison the malaria is of this kind.—Of the inorganic poisons some are taken into the blood, and emerge again from the body, unaltered, with one or more of the ordinary secretions; chiefly with the urine. They may induce changes in the body as they pass; and if these changes be salutary, the substances so inducing them become medicaments. If the changes be destructive or injurious they are strictly poisons. Other of the inorganic poisonous substances do not find so ready an exit from the body. They enter into permanent chemical union with the constituent tissues of particular organs. In this way, to use the words of Liebig, they deprive the organs of the principal property which appertains to their vital condition, viz., that of suffering and of effecting transformation. If the organs of which the functions are thus destroyed be vital organs, these poisons are fatal. But the animal poisons, those at least with which we are now concerned, act in a totally different manner. They effect changes in the blood, whereby they are themselves abundantly multiplied or reproduced; and the eruptive disease that ensues seems to be the mode provided by nature for the escape or the expulsion of this newly-formed morbid matter from the system. This is the old-fashioned humoral pathology, founded on bold, unproven speculation; and it is most curious to see these very doctrines, which had sunk into universal discredit and contempt, now again assuming their places, as scientific truths, upon the secure basis of organic chemistry. A wonderful specimen this of the sagacity of the older physicians—of the despised wisdom of our forefathers. The ancients attributed various disorders to a fermentation of the animal fluids. The cause of fever, according to Hippocrates, was some morbid matter in the blood. This matter, by a process of concoction, was brought, in a certain number of days, into a state in which it was ready for expulsion from the body. It was then thrown off by hæmorrhage, by sweat, by alvine discharges; or deposited upon the surface in the form of abscess, or cutaneous eruption; and these eruptions or evacuations constituted the crisis of each fever.

The doctrine thus enunciated by the father of physic is very nearly the same with that which Liebig is teaching in the 19th century. This distinguished chemist ascribes the phenomena which succeed the introduction of certain animal poisons into the blood, to a process exactly resembling fermentation. Let me try, in a few sentences, to expound to you his views on this deeply interesting subject.—You know that the brewer excites the fermentation of his sweet-wort by adding to it a small quantity of yeast. Wort is an infusion of malt, and contains sugar and gluten, with other vegetable matters, in solution. Yeast is putrefying gluten; and its component particles are, therefore, in a state of intestine motion or transposition. When placed in contact with sugar in solution, it has the property of communicating a similar motion to the elements of the sugar, whereby they arrange themselves into new and simpler forms; namely, into alcohol and carbonic acid. If there were no gluten in the wort, this would be the whole of the process. During which the added yeast disappears. But the decomposition or fermentation of the sugar reacts upon the gluten in the wort, and converts it gradually into yeast, which, mingling with the liberated carbonic acid, rises and floats upon the surface of the fermenting liquid; so that, when the process is completed, there has been produced thirty times as much yeast as was originally added to the wort. Now this is but a type of what happens in other fluids under analogous circumstances; and it may be laid down as an abstract proposition in Liebig's, or rather his translator's words, that "a substance in the act of decomposition, added to a mixed fluid in which its constituents are contained, can reproduce itself in that fluid, exactly in the same manner as new yeast is produced when yeast is added to liquids containing gluten." Thus the virus of small-pox (which virus is formed out of the blood) causes such a change in the blood as gives rise to the reproduction of the poison from the constituents of that fluid; and whilst this process is going on, the natural working of the animal economy is disturbed; the person is ill. The transformation is not arrested until all the particles of the blood which are susceptible of the decomposition have undergone the metamorphosis. Liebig shows that similar processes may take place in mixed fluids (and, therefore, in the blood) without the regeneration of the added substance; just as the fermentation of a solution of sugar is affected by the addition of yeast, without any reproduction of the yeast, if there be no gluten in the saccharine solution. In such cases, the disease, which accompanies or results from the transformations that occur in the blood, is not contagious; the poison is not renewed. It is thus, apparently, that certain miasms produce disorders which are not communicable from person to person. In order that a specific animal poison should effect its own reproduction in the blood and excite that commotion in the system which results from the formation and expulsion of the new virus, it is requisite that a certain ingredient (analogous to the gluten in the brewer's sweetwort) should be present in the blood; and this ingredient must have a definite relation to the given poison. If this ingredient be indispensably necessary to life, the poison, which transforms and destroys it, is inevitably a fatal poison. May not this be the *modus operandi* of the poison of hydrophobia? Again, if this ingredient be wanting, no reproduction of the poison takes place; nor, of course, any of those symptoms which are consequent upon such reproduction. The poisonous qualities of the animal substance are not developed; it ceases to be a poison; and this ingredient, if naturally present, is exhausted and destroyed,

for awhile at least, by the operation of the poison. Hence, for awhile at least, the same disease cannot be again produced by the agency of that poison. Supposing the ingredient to be one which is not essential to the composition of the blood, and to have been thus destroyed or exhausted, it may never be replaced; or it may be replaced only after a long interval. In some persons it may never exist at all; or it may exist at certain periods only of their lives. It may even be acquired by unnatural or peculiar modes of living. All this is not only very possible, but probable. A certain number of peculiar substances do certainly exist in the blood of some men which are absent from the blood of others. In childhood and in youth the blood of the same individual contains variable quantities of substances, which are not to be found in it at other periods of life. This theory of Liebig's offers, then, a reasonable explanation—the only explanation, indeed, that I have ever met with—of the curious facts, that certain contagious disorders furnish a protection, temporary or permanent, against their own return; that they have a tolerably definite period of incubation, and run, for the most part, a determinate course; that some persons are less susceptible than others of the influence of these animal poisons, or not susceptible at all; and that the same individual may be capable of taking a contagious disease at one time, and not at another. Moreover, the light supplied by this theory gives distinctness to our conceptions respecting certain deviations from the regular course and type of these diseases, which deviations are not uncommon. Thus the symptoms which precede and usher in the eruption are sometimes slow, halting, and irregular in their progress; appear, and then recede, and reappear, so that we are in doubt what is about to happen, until at length the disease declares itself in its decided and authentic form. We may suppose this to depend upon some tardiness or interruption of the process, whereby the virus is (to use the ancient term) concocted. Again, the series or combination of symptoms that mark the specific disease is sometimes, as I stated before, incomplete. We have the eruption of measles without the catarrhal symptoms; the sore-throat without the rash of scarlet fever. And experience has found that, where the malady is thus imperfectly developed, the protection it confers against its own recurrence is also incomplete. To explain this double failure we may reasonably infer a corresponding defect in the series of changes which the poison tends to produce in the mass of the blood. Glandular enlargements and chronic abscesses are frequent *sequela* of these exanthematous disorders. They may be considered to represent the dregs of the reproduced virus, which has been imperfectly eliminated from the system by the usual channels. The subtle contaminating effluvia which proceed from the bodies of the sick enter the blood of those who catch the disorder, chiefly, I imagine, by being inhaled into their lungs in breathing. The poison may, perhaps, be capable of being spontaneously absorbed through the skin; and upon this supposition oil has been smeared over the surface with the view of shutting out the contagion of the plague. The virus may gain direct entrance into the blood; we know that it does so, for we ourselves insert it, in inoculation of the small-pox. Dr. Francis Home succeeded in imparting measles by engrafting some blood of a person ill of that complaint; but subsequent attempts to excite the disease in that way have failed. Some rash and unfortunate trials have proved that the plague is communicable by inoculation with matter from the buboes.—*Med. Gaz.*

REVIEWS.

The Simple Treatment of Disease deduced from the Methods of Expectancy and Revulsion.
By James Gully, M.D., &c. &c. Churchill, London.

(Second Notice.)

IN our last number we took occasion, from a general survey of this book, to recommend it strongly to our readers' notice; but as many of our readers, misled by the general character of medical reviews, may have thought this a rather *ex cathedra* mode of proceeding, we shall now endeavour, in a minute examination, to give our reasons more in detail for speaking thus definitely, and then leave our readers unfettered to exercise their own powers of analysis in appreciating the truth of our criticism.

After a very short but appropriate preface which bears upon the matter—the subject matter, Mr. Hume would say of the work—and in which the “routine practice” is happily characterised by the sentence, that “any disease whatever being named, and its treatment demanded, a consultation equally brief with that in Molières comedy leads to the same routine advice:

“Clysterium donare
Postea seignare,
Ensuita purgare,”

we have a very excellent and exceedingly judicious condensation of the various systems of medicine which have obtained from the earliest periods to the present day, somewhat after the following manner:—Hippocrates taught, that the four elements of all bodies were fire, water, air, and earth; hence he deduced the qualities of heat, cold, humidity, and dryness. From these proceeded the four humours, and these in their combinations produced the temperaments—hence the humoral pathology, which for so many ages was taught in the schools of medicine, and guided and directed the practice of physicians. The first innovator upon this doctrine was Asclepiades, who upon the atoms and vacuum of Democritus, Epicurus, and Lucretius, erected his corpuscular system. Themiston followed with the illusory hope of reconciling the dogmatists and empiricists, or the Hippocratic and Asclepiadan systems. Mankind, according to the views of this physician, were afflicted but with three principal genera of disease—viz., those originating in constriction, those in relaxation, and those compounded of both, called mixed. He was the first who gave the solids a part in the production of disease, and founded the methodic sect. Fifty years after this, and in the reign of Nero, Thessalus, another innovator, but of the same sect, taught that “as disease consisted in the derangement of the said pores, it was necessary, in order to the restoration of health, to affect a total change in the condition of the body, or any part of it, which change he designated Metasyncretism, and which Galen rendered by the word Metaporothesis, as significant of the alteration of the pores.” In this doctrine, Dr. Gully discovers the semina of the “modern creed” concerning “change of action.” “The writings of Soranus,” continues the author, “who lived in the reigns of Trajan and Hadrian, and of Cœlius Aurelianus, his translator and commentator, only contain, as regards the theory of disease, some small refinements on that of Themiston, and some differences from this last author in the arrangement of certain diseases under the several categories of constriction and relaxation, and of acute and chronic.” (pp. 13, 14.) From the methodic sect sprung several subsections, as the Episynthetics, Eclectics, and Pneumatics, the latter of whom conceived disease to depend upon the “spirits,” but upon the nature of

which invisible agency, however, they seemed never to have agreed. In this doctrine we find the prodromus of the Archæus of Van Helmont, the anima of Stahl, the nervous influence of a later period, and the ganglionic or spinal theory of some modern physicians. Galen succeeded these writers, refining on the doctrine of Hippocrates, and for a time throwing all other physicians into the shade, so that it was commonly said by practitioners, that they preferred being wrong with Galen, to being right with all the world beside.

We must pass over the Greek and Roman physicians down to the sixth century, though among them were men of distinguished talents and accurate observation, and shall barely allude also to the Arabian writers, the most distinguished of whom were Ahrun, Rhazes, Avicenna, and Averroes. Medicine, according to Dr. Gully then, retrograded, and as usual the poor monks are blamed for this deterioration, as if they could help national folly, or control national enthusiasm. The true reason for the deplorable state in which medicine became involved was, that there was no demand for literature, and little time for learning. A pardonable but most infelicitous passion for rescuing the Holy Land from the hands of the infidels distracted the attention, and seized upon the faculties of the princes and nobles of Europe, and the power to wield a mace, or the art to break a lance, was more appreciated, because more required, than a treatise on the humoral pathology of Hippocrates, or a dissertation on the scholastic methodism of Themiston. The practice of the healing art, more properly speaking, fell into the hands of women, for men had neither inclination nor leisure for study, nor indeed were physicians much required. Men engaged in strenuous exertion, in ardent pursuits, in ambitious schemes, in martial enterprises, really have not time to accumulate in their system the leven of those diseases which require the close attention of the pathologists, and the incessant vigilance of the practitioner. Nature in these instances does what Dr. Gully so strongly and so justly recommends. She interposes only cessation of the exciting causes; she calls in the aid of sleep, *in our opinion an active faculty, and not a passive condition taking its rise in weariness*, when the vital principle or ganglionic system actually performs the cure by expectancy. But here we must desist, and return to our author—*hand passibus æquis*. Paracelsus, in the 15th century, originated the chemical sect, and whatever may be said of this proud man, whose extraordinary self-esteem provoked him into absurdities and theories as ridiculous as they were monstrous, still medicine owes him the discovery of alcohol, and the introduction of mercury into practice. These are heavy debts, and should be acknowledged on all occasions, though no two agents have been more abused or have inflicted greater evils on mankind. The next who disputed the field of medical supremacy were Sylvius, Willis, and Sydenham, who modified or altered the alchemical theory of Paracelsus. To them succeeded the mathematical schools of Borelli and Bellini, numbering among their scholars Pitcairne, Keil, Mead, and Friend. But this school was deficient in genius, and totally devoid of any ennobling or comprehensive view of human pathology. In the hands of its teachers, the body became a sort of New River reservoir, the heart a force-pump, the arteries the main channels, and the veins the leaden pipes which conveyed the blood, an inert flood, which supported and preserved the phenomena of life in the same manner as the Fleet ditch breeds and feeds the innumerable army of rats that colonize its sewers. This hypothesis was without imagination, and without dignity. It neither

informed nor exalted, neither amused by its novelty, nor surprised by its subtlety. It was a dry matter of fact problem, reducing the human body to the entities, area and diameter, to which were superadded the qualities, velocity and friction; without beauty and without fancy it wanted the grace to attract, and the variety to please; and as it lived unloved, so it died unregretted, leaving behind it no tenet worthy of resuscitation, and no “fact” which may not be disputed.

Of Stahl, of Hoffmann, Boerhaave, Cullen, Brown, Broussais, Parry, and others, we were desirous of saying not a little. But where time is fleeting, and space limited, delay must not be indulged, and prolixity cannot be admitted. We must suppose our readers acquainted with all the doctrines from Stahl down to Dr. Dickson, and bear with us for a brief moment, till we have said something of the method of cure recommended by the author.

Agreeing as we do in the general principles of practice inculcated by the author, we differ from him in others, because our experience does not accord with what he has laid down. We particularly allude to the remarks at p. 71, and especially to cayenne pepper in dyspepsia. Now we would ask Dr. Gully what he would do, were he called into a Jamaica overseer, labouring under all the symptoms of violent dyspepsia, who had been in the daily habit for years of consuming little less than a quart of spirits, and eating half a bushel (the expression is barely overcharged) of bird-pepper, if he refused to have recourse to stimulants, and among the rest to ammonia and cayenne? But however much we may be disposed to do otherwise, we must pass over these and proceed to the general conclusions which the doctor deduces from certain propositions and arguments, for which we must refer the reader to the work itself:—

“Disease commences on the external surface or skin; the internal surface, or viscera of vegetative life; or in the brain and spinal cord, the viscera of animal life.

“Commencing on the external surface, it is propagated to the internal and to the brain; commencing on the internal surface, it is propagated to the external and to the brain, or in the brain to the viscera of vegetative life and the skin.

“So long as disease commencing in the skin is not propagated beyond a certain degree to the viscera, life is not compromised.

“So long as disease, commencing in the viscera of the abdomen and chest, is not propagated beyond a certain degree to the brain, life is not compromised.

“So long as disease commencing in, or propagated to, the brain, does not re-act on the other viscera beyond a certain degree, life is not compromised.

“Hence the axiom that death comes only by the viscera.

“The great aim of treatment, therefore, is withdraw irritations from the viscera, and to save animal life.”

With this extract we must conclude the notice of this work—at the same time, however, recording the fact, that we do not assent entirely to the principles here laid down. We are of opinion that certain conditions of the blood are the causes of certain fevers and of most diseases—and that, keeping the expectant and simple treatment always in view, our practice must be regulated with the hope of improving its depraved condition. The saline treatment of Dr. Stevens, of which we think Dr. Gully makes no mention, is therefore not to be entirely forgotten. But we cannot plunge deeper into the question at present. The general principles of Dr. Gully's practice are

founded on sound physiological and pathological views, and with this conviction we recommend the work to those who make the revulsive or dynamic system their guide of practice.

The Climate of the South of Devon and its Influence upon Health, &c. By THOMAS SHAPTER, M.D., Physician to the Exeter Dispensary, &c.

THIS is a very useful practical work on the climate and diseases of the South of Devonshire, and notwithstanding recent treatises which have appeared, not only on the Watering places of England, but on climate generally, will be read with advantage by all who may be consulted as to the best places of nautical residence for invalids. Dr. Shapter divides his work into two parts. The first treats of the climate and diseases of the South of Devon, in which the Doctor includes a general physical description of the country, variations in temperature, statistical tables, and the annual mean difference of temperature between the various cities of Europe and the South of Devon, together with much incidental and very useful information. The summary of the diseases proper to Devon is carefully collated, and the prevalence or non-prevalence of fevers, epidemics, measles, &c., elaborately noted; so that a practitioner at a distance may know at a glance the prevailing disease at particular periods of the year, and thereby guard himself from the anomaly of sending a patient to that part of England for recovery of a stated disease, which, without this fore-knowledge, he might be led to do when the disorder was raging there. For example, on referring to Table III., p. 42, it will be found that during September, dropsies, diseases of the chest and brain, affections peculiar to females, and rheumatism, are materially decreased—while fever increases, and would appear to reach its maximum in October and November. Diarrhoea and dyspepsia, Dr. Shapter says, though prevalent in August, and continuing even in September, are, nevertheless, on the decline. As a numerical abstract of the proportional prevalence of annual disease, we are informed that "diseases of the lungs comprehend 17 per cent. of the whole diseases of the district, while those of the abdomen amount but to 14 per cent., and fevers only to 12."—p. 43.

Part the Second contains the Hydrology and Geology of the South of Devon, its Natural Productions, Zoology, Ornithology, Botany, and Horticulture; its civil and economical history, and the vital statistics of Exeter and its immediate neighbourhood. Altogether we must admit that we have derived much pleasure from the perusal of Dr. Shapter's work, and the profession will find it, we have no doubt, as useful as we declare it, pleasant to read. Dr. Shapter has well supplied the desideratum complained of by Sir James Clark, that "notwithstanding that public attention has been so long directed towards the climate of Devonshire, how few are the materials which can be collected with reference to this subject," and, therefore, should command the thanks of the profession.

Remarks on Amputation; an Essay submitted to the Faculty of Physicians and Surgeons of Glasgow, when Candidate for Admission into that Body. By ALEXANDER KING, Licentiate of the Royal College of Surgeons, and Member of the Glasgow Medical Society.

WE are induced to notice this spirited Essay, not so much for the novelty of the views inculcated regarding the subject of amputation, as to bring before the profession some important

and startling facts respecting the result of amputations in hospital practice. In the *old* hospitals, both of this country and of the Continent of Europe, the mortality of amputation cases averages as high as fifty per cent.; whereas, in new hospitals, as that of the University College or Westminster Hospital, the average mortality, as in private practice, is as low as ten per cent. This fact is brought prominently forward in the essay before us, and affords pabulum for much serious cogitation. The question naturally arises, what is the cause of this disparity? Is it attributable to the inefficiency of the medical officers of such establishments? By no means. In the Glasgow Royal Infirmary, which appears to be under excellent management, the deaths in such cases soon after the opening of the hospital in 1794, was extremely few. In thirty successive cases, one death is reported only to have occurred. Whereas, in the same hospital, of fifty-eight patients operated upon within the last three years, and notwithstanding all our boasted improvements in surgery, twenty-nine died. These are melancholy facts, and demand a searching investigation of the cause. Mr. King attributes the appalling result to causes arising from the constitution of our hospitals, as they are at present formed or constructed, and proposes some ingenious plans by which ventilation of hospitals may be effected, and the vitiated air and contagious miasmata counteracted or obviated. But for particulars we must refer our readers to the inaugural dissertation itself—a production highly creditable to the author, and calculated to lead to important practical results.

DR. CONOLLY AND LUNATIC AMELIORATION.

SIR,—Why has not Dr. Conolly been recommended by those in power for a baronetcy, or at least a knighthood, as a mark of her Majesty's favour? Why have not the public or the profession, or both conjointly, certified by a public entertainment and a solid souvenir, their sense of what is due to this good man and great physician? Cannot the "Medical Times" do itself the honour to be instrumental in suggesting and forwarding so laudable and desirable a thing as that of lessening, even partially, the obligations which we are under to the man whose benevolence and untiring industry have accomplished so much of practical good for us all, without distinction between the invalids immediately benefited and the sane or healthy, who are remotely concerned? I am almost unknown, although not quite so, to Dr. Conolly, else this would come with a bad grace from your obedient servant,

A PRACTITIONER.

Richmond, August 4th, 1842.

P.S.—A committee of such men as Drs. Elliotson, Marshall Hall, &c., should set to work, and Mr. Serjeant Adams must not be forgotten in the invitation. Should a subscription be set on foot for the purpose of offering something substantial to Dr. Conolly, I would directly forward five pounds towards it.

[Our Correspondent has favoured us with his name, one, by the way, well known to Physiological science. He certainly hits upon a good thought, and if purses were as responsive as feelings, we should hope to see his letter speedily followed by a demonstration, doubtless as pleasing to Dr. Conolly as creditable to ourselves. Will Drs. Elliotson, Marshall Hall, Davey, J. Webster, Mr. Serjeant Adams, and our correspondent, at once form themselves into a provisional committee? Our advertising columns will be at their service free of expense. We should like much to see the profession honour itself by so creditable a proof of its appreciation of such very great and very unassuming merit.—ED.]

MEDICAL MEMS. OF THE WEEK. By PERISCOPICUS.

SCURVY.—Medical writers, says Dr. G. Budd, have been slow to admit, what the history of this disease incontestably proves, that scurvy is the effect of deficient nutriment only; and that cold, defective ventilation, and the various causes assigned for it, have no other influence than in so far as they waste the body or impair nutrition. The time during which abstinence from succulent vegetables must be continued in order to produce scurvy, varies according to the nature of the food on which the person has been living. The disease showed itself earlier in the voyages undertaken in spring, when the men for some time had eaten sparingly of vegetables, than in voyages commenced at the end of summer, when vegetables and fruits had been for some time abundant. The element, whatever it be, which the vegetable juices furnish, and which is the true preventive of scurvy, is expended slowly. The better a person has been supplied with it the longer he can subsist without it. We have an analogous fact in the prolonged abstinence from food that animals which have much fat can maintain. The fat is slowly consumed in fuel for the respiration and animal heat. Scurvy, in common no doubt with all diseases that result from deficient nutriment, shows itself soonest in young persons, and in persons wasted by losses of blood, by great bodily exertion, or by illness, and in persons in whom, from age or any other cause, the assimilating powers are weak. A remarkable circumstance in its history is the rapidity with which recovery takes place, when the patient is freely supplied with oranges or lemons, or almost any fresh succulent vegetables or fruits. In the course of a few days only, the complexion loses its sallow and dusky hue; the gums become firm and florid; the effusions of blood on the skin and between the muscles disappear; the despondency and muscular weakness give place to cheerfulness and a feeling of strength—every thing betokens the rapid return of health. The recovery is not only rapid, but it is complete. The result of some analyses of scurvy blood, made for me by my friend Mr. Busk, shows that the proportion of hematosine is much diminished, while that of the fibrine, of the albumen, and of the salts, is increased. The diminished proportion of hematosine, or of the globules, might have been inferred, without any analysis of the blood, from the general paleness of the tissues; and it affords a satisfactory explanation of the tendency to swoon, so constantly observed in scurvy; for physiologists have shown that the vivifying influence of blood on the nervous system is mainly due to the globules. But a diminished proportion of globules affords no explanation of the spongy state of the gums and the great tendency to hæmorrhage; for those symptoms are not met with in chlorosis, in the advanced stage of granular kidney, and other diseases, in which the proportion of globules is likewise diminished. On the contrary, it appears from the researches of MM. Andral and Gavarret, that in most diseases in which there is a marked tendency to hæmorrhage, the chief peculiarity of the blood is an excess of globules. The change of the blood that constitutes scurvy must, then, be of more special kind than a mere diminution of globules. This change cannot consist in diminution of albumen or fibrine, for analysis shows that no such diminution exists. Besides, in granular kidney, the blood is often much drained of its albumen without producing any scorbutic symptoms. If, as the origin of the disease seems to show, the fault of scurvy-blood is deficiency of some of its

constituents, the most probable supposition is, that this deficiency is in the salts; that some saline principles, small perhaps in amount, but important in agency, and necessary for the nutrition of some tissues, is wanting. The tissue that seems to suffer most is that of the small blood-vessels, which become weak and easily ruptured. The spongy state of the gums, the fungoid granulations of ulcers, the hæmorrhage that takes place in the lower extremities, where the vessels are exposed to additional pressure from the gravitation of the blood, may perhaps be explained by defective nutrition of the small vessels. The hair, the nails, the transparent cornea—parts that suffer in animals kept on a diet deficient in nitrogen—are not affected in scurvy. The hair does not fall off, the cornea does not lose its transparency. We have another clue to the principle wanting in scurvy-blood, by considering the source from which it may be restored; namely, the succulent juices of vegetables and fruits. These juices—the preventives and specific remedies of scurvy—contain albumen, fibrine, and organic acids in combination with inorganic bases. Their virtues cannot depend on their albumen or fibrine, because these are in excess, rather than default in scurvy-blood. They must depend on some of the incidental principles with which the albumen and fibrine are associated. The radical importance of such principles, both in plants and animals, has been well shown of late by Prout, Liebig, and other chemists, and might have been inferred from the constancy of their presence, and from the fixed proportion which certain of them bear to the other constituents of particular tissues. In the history of scurvy we find frequent instances of the great craving that almost always exists for substances much required by the system. Dr. Lind says that he has often observed, upon seeing scorbutic people landed at our hospitals, that the eating of oranges and lemons was attended with a pleasure more easily imagined than described; and the same remark has been made by other naval physicians. Bachstrom, in an account he has left us of the ravages of scurvy during the siege of Thorn, in Prussia, in 1703, says that when some of the coarsest vegetables were sent to the town by the besiegers for the use of a particular family, they were seized on by the officers at the gates, and eagerly devoured as the greatest delicacies. A still more touching instance is given in the narrative of the famous voyage of Lord Anson, when, on their arrival at the island of Juan Fernandez, the grass even was considered a dainty, and eaten with avidity by the scorbutic sailors.

DISLOCATION OF THE HIP INTO THE ISCHIATIC NOTCH IN A CHILD.—A. B., aged seven and a half years, was admitted into St. Bartholomew's Hospital, April 30th, 1836, with an injury of the hip, which had taken place about an hour previously. The left leg was about an inch and a half shorter than the right, the knee bent across the opposite limb, the foot a very little turned inwards. When the boy stood, the leg remained much in the same state, the toes barely reaching the ground; the head of the femur was felt resting near the great ischiatic notch; there was power of flexion remaining, but the limb could not be rotated outwards to any extent. The accident occurred thus:—Carrying a lad on his back, his foot slipped into a hole, and he fell forwards with his burthen. The reduction was attempted by the house-surgeon and dressers, but failed, owing to the difficulty of fixing the pelvis. Mr. Skey then reduced the luxation thus:—The patient was placed on a high table lying on his side; a jack-towel was placed between the scro-

tum and thigh (being twisted); it was firmly held by an assistant; a napkin was placed beneath this, and held by the house-surgeon in such a direction as to prevent the bone pressing in the groin; extension was steadily kept up, from the ankle, by two assistants, Mr. Skey gently elevating and rotating the limb outwards. By these means the head of the bone quickly returned to its socket. There was some discussion as to the situation of the dislocated bone. Mr. Skey would not undertake to say that the head of the bone rested in the notch, but was rather inclined to think it rested close on its border; it corresponded, however, with the description given by Sir A. Cooper of the symptoms of dislocation into the ischiatic notch.

AMPUTATION DURING SPREADING GANGRENE.—Mr. Toogood, surgeon to the Bridge-water Infirmary, publishes another case to show the propriety and safety of amputation during the progress of gangrene.—T. Baddis, a stout youth of eighteen, was admitted on Sunday morning, who had suffered severe injuries of both legs, from having become entangled in the coils of a rope attached to a steam-tug. There was a considerable lacerated wound of the right leg, which had completely divided the tendo-Achillis; the calf of the left leg was entirely torn up, the muscles being separated from the bones, the fibula broken into several pieces, the posterior tibial artery and nerves divided. The hæmorrhage, which had been very profuse, still continued, and the poor boy was in a state of great exhaustion. As there appeared to be no chance of saving the left leg, amputation was proposed; but as the friends refused the operation, the vessels were secured, and the parts brought as well together as circumstances would permit. There was no further bleeding, and he gradually recovered from the state of collapse. In the evening he had great fever, restlessness, and pain; the foot was cold and becoming livid. The following day he continued much in the same state, but the coldness and lividity of the foot gradually increased. On Tuesday morning the foot was found quite black, and the gangrene had spread to the calf, and was rapidly extending. His friends now consented to the removal of the limb, to which the patient had always been willing to consent. It was amputated as close to the knee-joint as possible, and it was remarked that he lost less blood than was ever observed at any operation which had been performed at the Infirmary. He soon became tranquil, and all the violent symptoms which a few hours before threatened speedy dissolution, rapidly subsided. On opening the stump at the usual time, the surface appeared sloughy, and this state extended to the integuments, particularly on the outside of the limb, to nearly an inch above the incision, but the sloughs were not deep. They separated on the eighth day, leaving a clean surface, and the patient has been so steadily progressing towards recovery as to leave no doubt of its being complete. A crepitus could be readily distinguished about the foot and ankle, but it did not extend to the wound.

TERMINATION OF NERVES.—M. Mandl agrees with Valentin, Burdach, &c., as to the general termination of nerves in loops, but his attention has principally been directed to discover in what manner parts, during their growth, acquire nervous fibres; for, at whatever age or size an animal be examined, the nerves are always found terminating in loops. The results of his observations are—that in young animals the bundles of nerves are destitute of neurilemma; and when a new tissue is formed, it commences by the production of some corpuscles between the primitive fibres composing a bundle of nerves, in consequence of which, one or two ele-

mentary fibres are, by the new production, separated from the rest of the bundle. In proportion as these corpuscles undergo their development, and new ones are formed, the primitive fibres, which were at first but little separated from the direction of the bundle, become more and more divided, and form a true loop; (the new parenchyma is not, however, formed solely between the primitive fibres.) It appears that the primitive fibres exist in the same numbers in young animals as in the adults, the division of one into two not having been in any instance traceable. In the same memoir M. Mandl adds some remarks on the structure of the retina, which he says is divisible into two layers—the internal, in contact with the vitreous humour, is composed of the same elements as the cortical substance of the brain; the external portion contains, besides the blood-vessels and the expansion of the optic nerve, peculiar bodies which the author describes under the name of *baguettes*. They form the most external layer, being placed obliquely. In birds they measure 1-100 to 1-50 millimetre in length, 1-300 millimetre in width, and having on their outer extremity an oil-globule of a more or less deep yellow or red colour, whilst they terminate internally in a very fine thin thread. No relation can be traced between these *baguettes* and the optic nerve. The eyes must be examined fresh, and the retina in the liquid of the vitreous humour, any other fluid destroying its structure.

CONSTITUENTS OF BRAIN.—However strange, says Liebig, the idea may at first sight appear, that the alkaloids of opium or of cinchona bark, the elements of codeine, morphia, quinine, &c., may be converted into constituents of brain and nervous matter, into organs of vital energy, from which the organic motions of the body derive their origin; that these substances form a constituent of that matter, by the removal of which the seat of intellectual life, of sensation, and of consciousness is annihilated; it is nevertheless certain, that all these forms of power and activity are most closely dependent, not only on the existence, but also on a certain quality of the substance of the brain, spinal marrow, and nerves; insomuch, that all the manifestations of the life or vital energy of these modifications of nervous matter, which are recognised as the phenomena of motion, sensation, or feeling, assume another form as soon as their composition is altered. The animal organism has produced the brain and nerves out of compounds furnished to it by vegetables: it is the constituents of the food of the animal, which, in consequence of a series of changes, have assumed the properties and the structure which we find in the brain and nerves.

STRYCHNIA IN AMAUROSIS.—A labouring boy, 12 years old, received a blow in the right supra-orbital region, by the falling of a pewter vessel which he was endeavouring to remove from a high shelf. At the moment of receiving the blow he perceived a flash of light in the eye, but could see nothing with it afterwards. In three hours he came under the care of Dr. Dusterberg, of Lippstadt. Immediately above the right eyelid was visible a small blue spot, of the size of a horse-bean. In the eyeball itself nothing abnormal could be detected; no trace of opacity or extravasation of blood. The pupil acted naturally, as in the sound organ, but the power of vision was entirely lost in the right eye; so that he was unconscious when it was directed towards the full glare of the sun. He was treated for two months with bleeding, cold applications, mercurial frictions, blisters, drastics, emetics, electricity, and even the frontal nerve was divided; but all in vain, the amaurosis did not in any degree yield. Subsequently a solution of a grain of nitrate of strychnia in half

an ounce of rectified spirit of wine was dropped into the eye four or five times daily; the result of which was, that, in fourteen days, sensations of light were experienced in the affected eye, which, under the continued use of the remedy, increased so that he was enabled to distinguish coloured objects. After a period of three months, the power of vision had so far returned that he could recognise bodies at a distance of three feet. At this point the improvement stopped, notwithstanding that the dose of the strychnia was increased, and its endermic application had recourse to. The case, however, may fairly be adduced to show the beneficial influence of strychnia on torpid amaurosis.

GOUT.—A patient, 56 years old, of a strong constitution and addicted to good living, had been subject to gout ever since his 24th year, and during the attacks of gout his urine frequently deposited a red sediment. After severe attacks he had observed a tenacious white matter form on his hands. Four grains and a half of this substance, examined under the microscope, presented a number of transparent crystals. By chemical analysis it was ascertained to be composed of albumen in large quantity—about four-fifths, of lactic and phosphoric acid, chloride of soda and phosphate of lime, and evident traces of urate of soda.

CONGENITAL PHYMOSIS.—A man came into the King's College Hospital, supposing that he was suffering from stricture of the urethra; the condition of the prepuce, however, induced Mr. Fergusson to suppose that many of the symptoms under which he suffered might depend on the constriction which it produced on the glans. The Professor drew the prepuce forward, and by one stroke of the bistoury removed the elongated portion, and with the scissors slit up the mucous membrane in a vertical direction, which from the retraction of the skin was left considerably longer; and then by the use of some stitches, he endeavoured to procure that which should be the great aim of the surgeon in these instances, union by the first intention. This union took place, and in a few days the man left the house, relieved from all inconvenience which he had previously experienced.

ULCER OF THE TONGUE.—The man, Smith, was sent into the King's College Hospital with an ulcer of the tongue, resembling soft cancer. When first admitted, Mr. Fergusson's impression was, that an operation for the removal of the disease would be necessary, as there were all the indications of the disease alluded to; such as an excavated ulcer with a hardened base. From the previous history of the man, however, which was one anything but favourable to cancer, he was induced to pause before he proceeded to so cruel and formidable an operation as the removal of half the tongue, the more especially as he learned that the patient had a somewhat similar attack a short time previously, which, after a little treatment, was perfectly cured. Under these circumstances he resolved to watch the case, and the patient was placed under regulated diet and a course of iodine. Under this plan the man had improved remarkably in a fortnight, and had continued gradually to make progress up to his discharge, when very little trace of the disease existed. He had little doubt but that in a short time, if attention were paid to this patient's health, that his tongue would become perfectly natural. There is a class of persons who supposed that a particular remedy was a specific for all forms of disease. To these parties a case like this would afford ample ground for improper deductions as to the power of iodine. It was difficult, in this case, to know to what to attribute the change; it was most likely, however, dependent on the regular habits and proper diet which the patient received in the house.

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MEDICAL NEWS.

FRENCH ACADEMY OF SCIENCES.—M. Arago was in the right when he thought that the discovery of the Daguerotype would open a new field to optical science. M. de Humboldt has transmitted to the Academy observations of M. Moser, of which we shall only mention the following:—If a medal is placed on a plate of silver treated with iodine, and the medal be taken away after a few minutes, it will be found that it has left behind on the plate a distinct image, and which vapour of mercury will make perfectly clear and intense. This phenomenon is produced as well in the darkness as under the influence of light. Some equally interesting discoveries have been made in Germany, to which we shall revert:—A memoir, by M. Rameaux, on the temperature of plants, tends to fully prove the former assumption of M. de Humboldt, that as the climate of the Himalaya mountains is half Asiatic and half European, the plants, and other natural productions, will correspond with that double character.

DEATH OF BARON LARREY.—French surgery has just lost one of its brightest ornaments, by the decease of Baron Larrey, which took place at Lyons on the 29th ult., about the same hour that his wife, the Baroness, died at Paris. He was on his return from Algeria, after making an inspection of the French troops in that colony.

MORTALITY.—The number of deaths in the spring quarter (ending June 30th) was 38,190, or 6289 less than in the winter quarter immediately preceding, when 44,479 deaths were registered. The mortality has fallen 16.4 per cent.—one-sixth part. In former years the mortality was 5.7 per cent. less in the spring than in the winter quarters; hence not more

than 11 per cent. of the decrease can be fairly ascribed to other causes than the temperature of the seasons. The number of deaths in the last spring quarter was 2515 less than the average of the four preceding spring quarters—(1838-41.) The interval between the middle points of the two periods was 2.37 years, and in that time, at the rate of 1.74 per cent. annually—the population must have increased about 4.4 per cent. If the rate of mortality had remained the same, 42,509 deaths would have been registered. But the number of deaths was only 38,190, and the result is in accordance with that announced in the previous paragraph, that the mortality was 11 per cent. below the average of the season, deduced from the returns of four previous years. The returns for the whole kingdom show that the rate of mortality was high during the year 1840, and continued high during the winter of 1841; it began to decline in the spring of 1841, and continued to fall slowly through the winter of 1842, until in the spring quarter of 1842, the mortality was, as has been already seen, 11 per cent. below the average of the four preceding spring quarters. As a general rule, two persons are on an average constantly sick for one death in the year (*McCulloch's Statistics of British Empire—Vital Statistics*); and, according to this proportion, 305,520 were sick during the spring quarter ending June 30th, 1842. If the mortality and sickness had been the same in the 114 districts as in the previous springs, 340,072 persons would have been constantly suffering from sickness. The reduction in the average number of sick persons was, therefore, probably about 35,552. In the metropolis the epidemic of *hooping-cough* declined, the deaths were 402; 263 persons died of *typhus*, 195 of *scarlatina*, 59 of small-pox. Of measles 334 died. The number of deaths by diseases of the epidemic class was 785 less than the average of four preceding spring quarters. The mean temperature of spring at the apartments of the Royal Society, London, was 2.4 degrees above the average of 10 years (1831-40). The fall of rain was 3 inches, or one-third less than the average. The air was drier, and the barometer higher than usual; but rain fell on 32 days, while on an average it falls on 30 days in the season (91 days.) Some districts in which the number of deaths was greater than the average of the spring quarter in the same districts:—Isle of Wight, Plymouth, Redruth, Penzance, Cheltenham, Wolverhampton, West Derby, Coventry, Bradford, Leeds, York, Carlisle, Anglesey. Districts in which the number of deaths was less than the average of the spring quarter in the same districts:—The districts of the metropolis, Brighton, Windsor, Oxford, Northampton, Bedford, Cambridge, Norwich, Stroud, Worcester, Kidderminster, Birmingham, Nottingham, Stockport, Liverpool, Blackburn, Rochdale, Bury, Bolton, Wigan, Manchester, Salford, Sheffield, Huddersfield, Sunderland, Newcastle-on-Tyne, Cockermouth, Abergavenny, Pontypool, Merthyr Tydvil, Holywell, Wrexham, Newtown.—*Registrar General's Report.*

The Tenth Scientific Congress of France will commence its sittings at Strasburg on the 28th of next month. The session will last from 10 to 15 days. We are told that among the many important papers to be read, those on medicine, natural history, and physics promise to be most numerous and of greatest interest.

The magnificent library (of agriculture and veterinary science) of the late M. Huzard, Inspector-General of the French Veterinary Academies, &c., is shortly to be sold by auction. The catalogue alone consists of 3 vols. 8vo., and contains ten thousand lots.

SCIENTIFIC MEMORANDA.—From recent researches it appears that the subcarbonate of potass is an excellent substance for preserving from putrefaction animal or vegetable bodies immersed in its solution.—At Liebig's election as corresponding member of the chemical section of the French Institute, Professor Graham was among the opposing candidates.—M. Seignourgent attributes the small-pox pustule to an insect, similar to that recognised as existing in the itch. All traces of small-pox, he avers, may be completely prevented, by powdering the face of a small-pox patient with calomel.—When a well or vat contains carbonic acid, and it is desired to descend into it, the carbonic acid (or choke-damp) may be removed by first lowering down a grate full of burning charcoal. The charcoal is extinguished, but absorbs thirty times its volume of carbonic acid.—An alloy of iron and lead may be formed by reducing them simultaneously from slag, rich in iron and lead, in a crucible lined with charcoal. The alloy is hard and brittle, and consists of 99.76 of iron and 3.24 of lead.—*Echo du Monde Savant.*

PARIS HOSPITALS.—The *National*, in stating that typhoid fevers are raging to a great extent amongst the inhabitants of Paris, passes some severe strictures on the hospitals of that city, and after having enumerated several important defects, and malpractices, exclaims: "Et cela s'appelle administrer." And this is called administration.—We may add, C'est tout comme chez nous!

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Admitted Monday, August 8th, 1842:—

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LECTURES ON THE ANATOMY AND PHYSIOLOGY OF THE NERVOUS SYSTEM.

By Professor OWEN, F.R.S., &c.

THE molluscan animals present so great a diversity of external form, that the naturalness of the group is by no means indicated thereby, nor could it have been recognised by zoologists, who merely studied their external characters. It was not, indeed, until their nervous system had been fully and extensively investigated that their natural affinities and claims to be regarded as a primary division of the animal kingdom were established. The history of this advance in zoology exemplifies, in a very striking manner, the essential steps, and the philosophy of the progress of the science in general. If we analyze the motives or grounds of the first advances in the scientific classification of animals, we shall find that these were based upon the idea of *likeness*. All animals that resembled each other, in having red blood, were placed by Aristotle in one great primary group; those which had white blood, which Aristotle thought to be no blood at all, formed the second group of animals. The next important step, which formed the first real improvement upon Aristotle's system, rose out of the observation of Cuvier, that certain vermes possessed red blood, and ought therefore to belong, in virtue of that character, to the sanguineous animals of the Aristotelian system; but here another dominant idea governing the classification of animals opposed itself to the separation of the red-blooded worms from the white-blooded animals, viz., the idea of *unlikeness*, of their dissimilarity from all the other red-blooded animals in every essential characteristic, except that derived from the circulating fluid. The primary division, therefore, of Aristotle was retained, but based upon the character of the skeleton; and the animal kingdom was divided into vertebrated and invertebrated animals. A third essential idea is, however, indispensable for a truly philosophical distribution of animals, viz., that of *proportion*; and this idea had obviously been neglected in the proposition of so extremely an unequal division of the animal kingdom, as that proposed by La Marck. The discovery of the primary group of animals in well-balanced and due proportions was due entirely to investigation of their nervous system, and the consequent discerning of its leading types.

The principal modifications of two of these types, viz., the *radiated* and *homogangliated*, have already been discussed in the previous lectures, and we now come to consider the varieties of the *third* or *heterogangliatic* type, so called from the dispersed and irregular manner in which ganglionic centres of nervous matter are distributed. In the lowest of the molluscan animals we find at least one ganglion forming part of their nervous system. This is its character even in the fixed and compound tunicated mollusca, which, in their motionless condition, their texture, outward configuration, stellated orifices, and the community of organic substance to many individuals, approach more closely

than any of the articulated animals to, and have been mistaken by many good naturalists for, zoophytes. The large Ascidian or Squirter, whose anatomy Hunter has here so beautifully exposed, enjoys in no essential degree a different, or a higher organization than the compound polyp-like species of the same family. Nor has the nervous system of these been found by the laborious Savigné and Edwards to be inferior to that which Cuvier discovered and described in large solitary species similar to this. A few words as to its general structure will be necessary to render the disposition, relations, and function of the nervous system intelligible.

The Ascidian is enveloped in a flexible elastic covering, which is lined by a contractile muscular tunic, both of which are perforated by two apertures, and adhere together at the margin of these. To one of the apertures the breathing sac is likewise attached, at the bottom of which is situated the mouth: the anus and the oviduct terminate at the other aperture. The nervous system should be looked for first in the interspace of these apertures, where midway and upon the muscular tunic will be discerned a ganglion. From this there radiate several nerves, the two largest proceeding in opposite directions to the two apertures which they severally enclose. A third notable branch descends to the mouth, the rest are distributed to the muscular tunic. The nerve proceeding to the mouth is in reality a double column, the two parts divaricating and surrounding that aperture. Some anatomists have described other ganglionic centres of the nervous system in connection with the intestine or liver, or other viscera; but of these I cannot speak from actual observation. The parts which are here shown (demonstrating the dissections, and pointing to the diagrams) have been recognised by Cuvier, Savigné, and Edwards. The main requisites of those who wish to profit by the teaching of the Comparative Physiologist are the signification and relations of these parts. Now, when we consider what the Ascidian has to do in the scheme of animated existence, its duties would seem to be amongst the lowest. The things which it removes or alters are invisible, or nearly so; its wants appear to be simply to breathe, to feed, to discharge its excrements, and emancipate its progeny. Its food, moreover, is obtained by the same process as its respiratory medium. The streams of water drawn in by the expansion of its elastic tunic, whilst they distribute oxygen over the surface of its vascular gill, at the same time bring the nutrient monad or molecules to the mouth, or rather we should say, to the beginning of the gullet, for there is no true mouth, no jaws, no teeth, no means of comminuting or preparing the nutriment for deglutition. The act of respiration then being the only obvious phenomenon in this equally important matter of obtaining food, let us consider in what it essentially consists. In ourselves when at rest, breathing is purely an involuntary act, in reference to the nervous system—a reflex action. When the exigencies of some violent locomotive effort are to be provided for, we accelerate the breathing process by volition; but locomotion is altogether denied in the Ascidian. We must suppose, then, that the same want which, impressed in man upon the medulla oblongata by the medium of the nervous vagus is reflected along the phrenic nerves independently of sensation or of volition, is similarly impressed upon and reflected from some homologous nervous centre in the Ascidian; and such a centre is obviously presented to us by the ganglion between the respiratory and anal orifices. Ordinary respiration in this animal is effected by an organization, the actions of which seem to be less dependent on a nervous centre than those of any of the peristaltically moving parts, the respiratory medium

being renewed upon the vascular surface of the gill by the action of vibratile cilia. At intervals the Ascidian appears unusually distended, and the water is expelled from the breathing sac by a sudden and forcible contraction of the mantle, an act which may be compared with the involuntary yawn by which we extend our lungs to the utmost and empty them by a violent expiration. The contents of the rectum, and of the generative tubes, are expelled by the same contraction of the mantle, though by a different outlet from that which gives passage to the breathing streams. Both outlets are provided with feelers and sphincters to test and prevent the entry of noxious bodies, and to regulate the exit of the excretory currents.

Now the nervous system which has been demonstrated in the Ascidian seems equal to the regulation of all those actions. Influences transmitted to the branchial ganglion may be reflected along the nerves to the muscular sac, and so excite the required action. But certain particles in the respiratory sac may be unfit for food, or hunger may demand a more frequent and greater distension of the sac; impressions to that effect may then be conveyed along the nervous chord proceeding from the mouth to the branchial ganglion, and reciprocally impressions received by the branchial ganglion may be conveyed to and produce contractions of the mouth.

In the oyster the mouth is, as it were, released from the breathing sac; whereby we might presume that the animal had more choice. We find it in fact provided with labial processes, organs, perhaps, of selection, and hence possessing nervous centres of their own; but the oyster, like the Ascidian, is chained to the place of its growth; its movements are limited to the expulsion of the respiratory streams, hurrying out the excrement or ova by a sudden approximation of the protecting valves. We find, accordingly, that the muscular system is concentrated into a single large adductor, and it is upon this muscle that the chief ganglion or centre of nervous power is situated. This ganglion, analogous to the branchial ganglion of the Ascidian, is connected with the labial ganglion by two long nerves, including in their passage the visceral mass; a small and simple nervous loop encloses the stomach and liver, and is connected at its extremity with the labial ganglions. Two large nerves are continued from the branchial ganglion along the margin of each lobe of the mantle, where they divide and re-unite in a series of elongated anastomatic loops, and finally communicate with the minute branches, described and figured by Brandt to be given off by the labial ganglions. The true respiratory nerves are transmitted from the branchial ganglion to the base of the dorsal pair of gills.

In the locomotive bivalve mollusca, we find more complicated conditions of both the nerves and muscular systems. Some species are indeed anchored to rocks by a byssus, and swing to and fro, according to the limits of this cable; such have a muscular organ developed for the conveyance and application of the secretory material of which the byssus is composed. Other species, which are entirely free, have the same muscular organ, so developed and configured as to deserve the name of a foot. By means of this some creep, some leap, some spread it abroad on the surface of the water and thereby float; others thrust it into the sand, and therewith make burrows for retreat and concealment. In all such bivalves the shell assumes a more or less elongated form, and is closed by two distinct adductor muscles. In the common muscle the labial ganglions may be distinguished by their yellow colour at the base of the processes of the same name. They are connected by a short transverse nervous chord, passing above or in front of the mouth. From each of the ganglions two

principal nerves are given off, one passing forwards to the anterior adductor, the other backwards along the base of the foot and the visceral mass to the anterior margin of the posterior adductor. At a short distance from the labial ganglion, this latter nervous chord sends off a branch, which communicates with its fellow by means of a bilobed ganglion, situated at the anterior part of the base of the foot. This pedal ganglion, with the labial and the branchial ganglions just described, constitutes the principal centres of the nervous system, in the common bivalve here dissected. The pedal ganglion distributes nerves in one direction to the retractors in another to the substance of the foot. The branchial ganglions send off nerves which are distributed principally to the posterior pair of the breathing organs, and two large nerves which diverge as they pass over the adductor muscles to proceed to the base of the tentacular processes guarding the posterior lobes of the mantle; these continue along the margin of each lobe of the mantle until they meet and anastomose with corresponding branches which are continued over the anterior adductor muscles from the labial ganglions. Cuvier accurately describes this important feature in the nervous system of the bivalves. The marginal pallial nerve is not, however, simple, but consists rather of a series of elongated loops. The nerves of this and other bivalves present the soft and pellucid structure which is so common in the aquatic invertebrata. The modification of the nervous system, in other bivalved mollusca, have been ably compared and reduced to their analogues by Mr. Garner. In the oyster the suboesophageal loop is slender and contracted, and unconnected with any other ganglion excepting the labial ones in the pedate bivalves; the suboesophageal loop is more or less lengthened, having the form of a Roman arch, as in the *Pecten*, and that of the Gothic or pointed arch, as in the *Cardium* and *Mya*; it has for its keystone, if we may pursue this analogy, the nervous parts composing the pedal ganglion. In some species this is more distinctly bilobed than in others; sometimes, as in the *Pholas*, it is situated more superficially near the tip of the foot; in all it seems to be the centre, or one centre from which the viscera derive their nerves. The largest and most constant ganglions are those situated upon the posterior adductor muscle, following this muscle in all its varieties of position, and manifesting likewise differences in relation to the branchial, but always brought into direct communication with the oral or labial ganglions.

In these bivalves, as the *Ostrea*, the *Cardium*, *Unio*, *Anomia*, *Venus*, *Pholas*, *Teredo*, *Solen*, *Mya*, and *Macra*, in which the branchial ganglions of one side are united to those of the opposite, the branchial ganglia are conjoined. But in those, as the *Mytilus*, *Modiola*, *Pecten* in which the branchia are separate, and at a distance from one another, the two ganglia are distinct, and joined by a transverse chord of greater or less extent.

The nervous system of the univalve mollusca will be given in the next lecture.

COURSE OF LECTURES ON THE THEORY AND PRACTICE OF MEDICINE.

Delivered by C. J. B. WILLIAMS, M.D., F.R.S., Professor of the Practice of Medicine, and of Clinical Medicine, at University College.

GENTLEMEN,—The next subject for our consideration is that of *LOCAL plethora*, or the existence of too much blood in a limited *portion* of the body; and here the question will arise, how is it that the blood can accumulate in some parts more than in others? It is quite clear that the local fulness does not necessarily depend upon *general* fulness, for we frequently find *local* accumulations where the quantity of blood in the *general* system is by no means great, but even diminished considerably below the ordinary and healthy standard.

We shall commence with the consideration of *congestion*, or passive hyperæmia, which signifies the existence of *too much blood in a part, the rapidity of the circulation through such part being at the same time diminished*. Now, it must be perfectly obvious to you, that, for the production of an accumulation of blood in any part the blood-

vessels of that part must be *dilated*, and if the vessels which convey the blood to and from the seat of such dilatation be not also themselves enlarged, a diminution in rapidity of motion must result, and this is the condition of the vessels that we find in cases of congestion, viz., *dilatation of the small vessels of a part, the vessels leading to them not being equally dilated*.

We have next to inquire into some of the *causes* of this dilatation, and we shall discover that there are several.

1st. There is *mechanical obstruction* to the passage of blood from these vessels, whereby the vis a tergo continuing to operate, an accumulation of blood is effected; thus, in the ordinary operation of venesection, a ligature is placed upon the arm immediately above the spot where the opening is intended to be made, in order that by preventing the usual return of the blood from the vessels below the ligature an accumulation may take place, which accumulation is in fact congestion, caused by the mechanical influence of the ligature. So, also, we may have congestion produced in *internal* organs on a precisely similar principle; for example, the wearing of a tight cravat, or the pressure of a tumour upon the large veins in the neck, may cause congestion of the brain. Again, congestion of the lungs or liver may arise from diseases of the mitral or tricuspid valves of the heart, whereby the proper transit of the blood may be materially interfered with. Another instance of congestion, from mechanical obstruction, is seen in the veins of the abdomen when pressed upon by enlargement of the liver, thus it is that hæmorrhoids are generally produced. The character of this mechanical congestion is, that it becomes manifest primarily in the *veins*, and afterwards in the *capillary* vessels, as seen in the effects of the ligature placed upon the arm. In deciding upon the nature of redness observed in different tissues after death, it is of great importance to attend carefully to the state of the venous system, for if we find the neighbouring veins are much distended we may generally attribute the redness to *congestion*.

The second cause of congestion may be termed *gravitative* obstruction to the flow of blood from the vessels of a part; this constitutes *hypostatic* congestion; it is well illustrated by letting the arm hang down for a length of time, especially if the body is in the recumbent posture and the temperature of the room is high; the dependent parts will soon become red, and afterwards purple, indicating an accumulation of blood. The same principle is also applicable to the *internal* organs, the *lowest* being the most liable to congestion; thus, in persons of sedentary habits, the blood is prone to accumulate in the lower part of the intestines, producing piles, also in the uterus, causing derangement of its functions, &c.; great relief may frequently be obtained in cases of this mechanical description by a due regulation of the positions in which the body rests. In these cases, too, there is another element besides the mere weight of the blood, and that is, a feeble and yielding state of the vessels; their coats are weak, their fibres relaxed, and the action of the heart impaired. This is the commonest species of congestion, and presents itself in persons whose circulation is slow and of little power. The pain and uneasiness that sometimes arise under these circumstances may lead to the idea that the affection is of an inflammatory nature, and hence very improper treatment may be adopted. The most efficacious measures are those calculated to increase the circulation and strengthen the weakened vessels. Friction and exercise are very useful. Horse exercise is of great service in congestion of the uterus and liver. If, however, the congestion has been produced by too much exercise, relief will be obtained by rest.

We meet with many instances of this hypostatic accumulation in long-continued illnesses, the blood gravitates to the back, rendering it frequently sore and sloughy; it also collects in the posterior portions of the lungs and intestines, as evidenced by the colour of the parts when examined after death. Although we are unable in these cases to remove the weakness, which is the main cause of the congestion, still we may afford considerable relief by constant change of posture and moderate friction, &c.

A third cause of congestion is essentially a want of tone in the coats of the vessels; thus, if the arm is allowed to hang down for a long time, and then raised to the horizontal position, the accumulated blood will not be immediately dispersed, because the vessels have themselves become weakened. Examples of this fact are also seen in congestion in the brain or lungs produced by coughing, straining, &c., the congestion not being removed by the simple removal of the cause, since the vessels have lost their power of contracting rapidly.

4th. *Intropulsion* from *cold* is a cause of congestion. The blood is driven inwards from the superficial parts, and thus accumulates in the *internal* organs. If the application of the cold be long continued, the tonicity of the vessels become diminished, and the simple application of warmth will not restore the circulation, so that inflammation may be the consequence, or permanent congestion of the liver, lungs, &c., or even organic disease.

5th. Over stimulation may produce atony of the capillaries, and as a result, congestion. It has long been ascertained that the larger arteries will contract upon the application of a mechanical stimulus, and I have recently found by experiment that the same effects may be produced upon the smaller vessels also. Upon the sides of arteries a number of light lines may be seen to run, which give rise to a channelling appearance, and these lines indicate the extent to which the arteries may have been dilated under various circumstances. In the expanded state the channellings disappear.

The *primary* effect of applying a stimulus to an artery is *contraction*, and this is speedily followed by dilatation beyond the original calibre, after this the diameter becomes again diminished, and the vessel presents a tortuous appearance; the channels are also again perceived corresponding with the previous dilatation. The circulation then becomes sluggish, because the contractile power is weakened, and thus we have an example of congestion arising from undue stimulation; but the effects are not to be attributed *solely* to the atony of the blood-vessels, for the blood *particles* also assist in the congestive process, they appear to run together, and some seem to become attached to the parietes of the vessels; the lymph globules, moreover, are found to be increased in number, and by their adhesion to the capillary walls augment the amount of obstruction. Of this I shall have again to speak when we treat of the subject of inflammation, whereof this is, in fact, a primary stage.

We must bear in mind that causes which commence in one way may terminate in another way; thus, in cases of diseased heart the obstruction may commence in the veins and terminate in atony of the capillaries and *their* congestion, the venous system being unaffected.

We have seen that the application of cold may produce congestion by causing direct constriction of the vessels, both veins and arteries. But it has been noticed by M. Pousseuille that cold may operate likewise in *another* method. This observer applied ice to the mesentery of a frog, and found that the rapidity of the circulation through the part was considerably diminished, and at length stagnation almost effected, although he could detect no alteration in the diameter of the vessels. On the other hand, when, instead of ice, he applied warm water, he obtained just the opposite result, that is to say, the circulation was very much *accelerated*, but still no change was perceptible in the calibre of the capillaries. How, then, we might ask, was the rapidity of the circulation altered if the size of the vessels remained unchanged? M. Pousseuille observed that the blood globules in the central portion of the vessels moved more quickly than the particles in nearer proximity to the *parietes*, and he concluded that on the sides of the capillaries there is little or *no* motion of the particles in contact, but merely an inert layer of serum, the extent of which is increased by the application of cold, and diminished by the application of heat, so that a vessel, when hot, might admit the transition of *three* globules abreast, whereas the same vessel when cold would only allow such globules to pass along it in *single file*, and, indeed, if the cold were very intense, would not permit the movement of *any* globules at all. For confirmation of

this theory, M. Poisseuille appeals to some experiments, by which it was ascertained that *hot* liquids pass more quickly through *glass* tubes than do *cold* liquids; this was ascribed to the hot liquids possessing a less degree of cohesive attraction than the *cold*. It is probable that this principle is also applicable to the *blood-vessels*, and that *cold* does diminish the rapidity of the circulation by increasing the cohesive attraction, or in other words, the *spissitude* of the fluid itself; but yet this explanation alone is not satisfactory, for, by it, the influence of *vitality* would be entirely left out of consideration; and besides this, there are other obvious difficulties and inaccuracies in M. P.'s statements. He states, for instance, that hot-water applied to the vessels will greatly accelerate the movement of the blood in the *capillaries* without at all accelerating its movement through the vessels leading to and from such capillaries. Now this is certainly quite out of the question, for I have frequently found by experiment that cold and heat respectively do, when applied, diminish and increase the calibre of the *arterial* tubes. Again, the influence exercised by the motionless or inert layer has been decidedly *exaggerated*. He states that obstruction is caused by some of the blood particles getting into, and being detained by, this layer; but although I have examined the matter carefully, I have not been able to detect the existence of such adhesion. It is true that the *lymph* globules often get to the sides of the vessels, and roll along with a kind of dragging motion, frequently altering their appearance as if adhering to the coats, and these, I believe, are the main causes of obstruction. The cold increases the number of these globules, which, by sticking to the capillary walls, form an impediment to the rapid circulation of the blood.

We have now seen that heat and cold act physically on the *contents* of the vessels as well as vitally on the *coats* of the vessels themselves.

Let us next notice briefly some of the *EFFECTS* of congestion; these must necessarily vary with position and extent. Supposing the arm to be the seat of sanguineous accumulation, the first effect will be an increase of its sensibility, a feeling of heat and tension, and after a time it will become cold and numb; there may be difficulty in moving it, and, in consequence of the distension, pain and spasm may arise. In the case of a *secreting* organ we know that congestion produces an alteration in the *functions*, generally diminishing, but sometimes increasing, their activity. Thus, congestion of the liver is usually accompanied with *diminished* secretion of bile; if the capillaries are congested, the motion of the blood through them is lessened, and the effect of the motion will be felt chiefly at the arterial end of the capillaries, and therefore the secretory power will be diminished. But sometimes secretion is *increased*; thus, in bronchial congestion, there is first an *excess* of viscid matter, and subsequently of serous fluid. Congestion may also affect the *nervous* sympathies, probably by pressure upon the nervous filaments; we have an example of this in the production of vomiting by congestion of the stomach. Lastly, *nutrition* is affected by congestion; it is usually slowly increased, but yet the increase is not of an equal and healthy character.

The *treatment* of local congestion must be guided by an acquaintance with its causes; thus, if it arises from pressure upon a vein, such pressure must be removed. If the cause be mechanical, as in hypostatic congestion, change of posture and friction, &c., are indicated. If it is the result of propulsion, by cold, of blood inwards, we must endeavour to redraw it outwards by the application of warmth to the surface, and the administration of stimulants. If it arises, again, from *atony*, we may give stimulants as temporary remedies, and tonics as more permanent ones; astringents also are sometimes very useful. Heat and friction are serviceable in congestions. Heat increases the size of the arteries, and thus allows a good flow of blood to sweep away the obstructing globules. Cold is also beneficial by constricting the vessels, and afterwards producing reaction. If congestion of an internal organ is considerable, local depletion may be required, as cupping, leeching, or the like; sometimes derivation alone, as by *dry* cupping, may be sufficient, and tonics to improve the general energy

of the system; the shower-bath is frequently very valuable. Pressure is frequently an efficient assistant, as a bandage placed over the congested vessels.

OBSERVATIONS

On the Evils arising from the Use of Common Pessaries.—The Operations recommended for the removal of Prolapsus and Procidencia Uteri; and the Introduction of a New Pessary as a safe and effectual Substitute for both.

By CHARLES CLAY, M.D., Coll. Reg. Lond. M.R.C.S., Lecturer on Medical Jurisprudence, &c., Piccadilly, Manchester.

Read before the Medical Section of the British Association, June 28, 1842.

"The use of Pessaries, so often employed in the practice of those who devote themselves to the treatment of the diseases of females, is attended with so many disagreeable and unfavourable circumstances, that a reform has become absolutely necessary."

DIEFFENBACH.

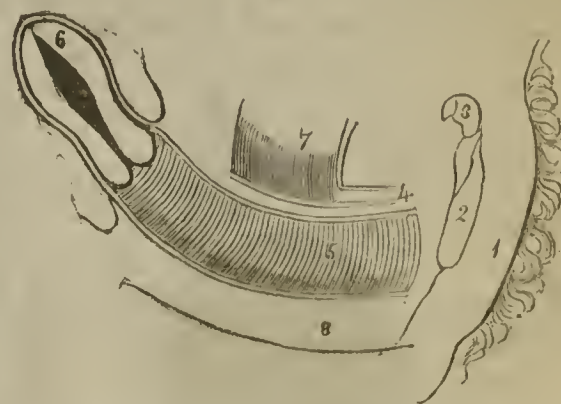
In the *Lancet* of Sept. 11, 1841, I endeavoured to direct the attention of the profession to the many and serious evils arising from the use of common pessaries, showing how ill-adapted such means were as mechanical agents in relieving the diseases for which they were applied, often producing evils as great as those sought to be remedied. In the same communication I ventured the suggestion of a new instrument on strictly legitimate mechanical principles, *agreeing with* and not *contrary to* the anatomical structure of the parts coming in contact with the instrument when applied, and giving every facility for such parts when differing from their normal state to regain their original tone, figure, and dimensions; and by this means entirely obliterate the diseases of procidencia and prolapsus uteri, without any great inconvenience or pain, and cure both in the most satisfactory and effectual manner. The diseases termed procidencia and prolapsus uteri are so prevalent, that they call on the profession the more loudly for the suppression of ill-contrived means for their removal, and render a more effectual and legitimate plan desirable, particularly when such plan can be shown to be perfectly consistent with the anatomical structure of the parts, and by its true mechanical principles, afford a means of cure, without substituting evils of greater amount, *which is the common tendency of every means hitherto suggested for the removal of such diseases without exception*. My remarks in the *Lancet* were mere hints; I have since that time had the satisfaction of testing the merits of my new invention to a considerable extent, and shall this day have the pleasure of advancing not only my own experience, but that of others who have been kind enough to give the instrument a trial; and, from their various suggestions, I am enabled to present to you an instrument, in every way calculated to secure all the success that can be desirable by its application. If I have to regret anything in pursuing this inquiry, it is, that the instrument is an expensive one, and on that account its usefulness will be considerably curtailed, and its application confined to those only whose means are adequate to the purchase. I have endeavoured to accomplish it in a cheap form, and though I have succeeded to a considerable extent, it is yet too expensive to be available for hospital practice, where perhaps such diseases are most prevalent. I may, however, receive suggestions from those now before me which will enable me to render its application more general, of which I shall gladly avail myself.

I have for some years had my attention drawn to the evils I have been alluding to, and have frequently witnessed serious mischiefs arising from the application of the old tribe of pessaries; and I feel surprised, that the well-known admitted skill and ingenuity of our profession should, up to the nineteenth century, have presented us with no better remedy for the object in view. I think it very difficult to reconcile the rapid march of improvement in the various departments of medical science, with the inconsistent means hitherto employed for the relief (and that of the most temporary character), I cannot say cure of procidencia and prolapsus uteri, in which there has not been any specific improvement for ages, the most modern propositions being as inefficient and as contrary to common sense as those first proposed by our earliest obstetric writers. It will be necessary

briefly to allude to such means hitherto employed, and then as briefly to sketch the evils resulting from their application.

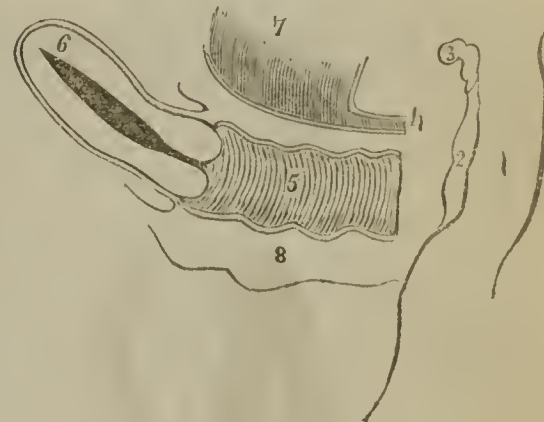
The object in view, when applying a pessary, ought to be to support the uterus in its normal position by a means that will not add to the already too great dilatation of the vaginal canal, allowing the motions of the body to be free from pain, and not interfering with any of its functions, giving an opportunity (whilst the means are employed) of allowing the debilitated structures to regain their original tone and dimensions; such are the real objects in view. The contrast of the vagina in a relaxed and in a healthy state, is easily seen by comparing *fig. 1* with *fig. 2*. *Fig. 1* has the

Fig. 1.



vaginal coats in a state of natural tension, and the uterine mass at a given distance. *Fig. 2*, the

Fig. 2.



vagina is relaxed, and the uterus approaches the os externum. But I would ask the reflective person, if such can be accomplished by any of the means hitherto in use, viz., balls, rings, inflated bags, sponges, abdominal bandages, and the like; with the exception of the last mentioned, many of them three or four times the diameter of the parts to which they are applied when in a natural state, producing the most disagreeable, unnatural, and extreme extension of the vaginal tissues, dragging down the uterine mass nearer to the os externum, and having the effect of placing the whole parts concerned in a worse position than *before, whenever the pessary is removed*; the only advantage (if it can be called one) is merely plugging up the entrance of the vaginal canal, and thus preventing the uterus from protruding. I believe I can also satisfactorily show you the modern plans of forming strictures and new adhesions are still more objectionable. It would be perfectly ridiculous to attach anything like intention to cure by such means; in order to prove this, I will examine their various capabilities. The ball, ring, oval, and pear-shaped pessaries, whether made of wood, ivory, metal, or india-rubber, are too well known to require particular description; the extraordinary dimensions, however, of some I cannot pass over without remarking, that many are three or four times the diameter of the vagina in its natural state; viz., they are made from two and a half to four inches in diameter, and from seven and a half to twelve inches in circumference, whilst the vagina is at most in a natural state one and a half inches in diameter, or a little more than four inches in circumference, (except during parturition). I am at a loss to know how a body of such dimensions can be justified in such a situation.

And yet Dr. Thomas, in his 'Practice of Physick,' edit. 1834, tell us very gravely, writing on the pessary, "*Its diameter ought not to exceed three inches and three-quarters,*" which, if circular, would be eleven inches or more, and if oval, ten inches and a half in circumference. I would ask the same author, how are these means to carry out his own intentions, which are expressed in these words? *The curative intentions are to increase the tone of the relaxed parts both topically and through the constitution, and to support the tumour.*" I cannot see, for my own part, how any relaxed organic structure can regain its usual tone by keeping it in a constant state of tension. I am convinced that neither ball, ring, pear-shaped inflated bag, nor sponge, supports the uterus in its proper situation, but in reality drags it towards the os externum; this is distinctly seen in *figs. 3 and 4*, and expressed in the plain diagram *fig. 5*, by

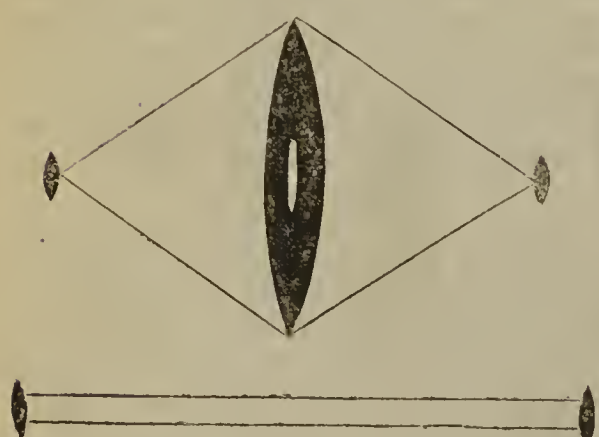
Fig. 3.



Fig. 4.



Fig. 5.



contrasting the difference of distance of the uterus from the os externum in a natural state, as shown in *fig. 1* with that of those of *3 and 4*. The sponge pessary (though it adapts itself more comfortably to the parts than a hard substance), yet its action is decidedly that of extreme extension, and therefore is highly objectionable; the same may be said of the india-rubber bag inflated with air after its introduction through a long stem. I may sum up the effects of all such ill-contrived schemes for extension in a few words; they have all the same

injurious tendency of stretching the vaginal coats—of not supporting the uterus, but merely preventing its protrusion without the os externum—of use only whilst present—when removed the condition of the parts worse than before—a considerable increase of vitiated discharges from the vaginal and uterine surfaces—and serious objects of obstruction to the functions of the pelvic viscera.

There is another line of treatment which has been proposed, the disciples of extension having done so little towards effecting their object; a new set sprung up which for contrast might be termed the school of contraction, its principles being the very opposite to those already enumerated. I wish I could approach this class with anything like a hope that suffering humanity had been cared for; but, I must confess, the followers of the latter doctrine, evidently outstrip the others in cruelty. The first plan I shall notice of the contraction school is that of *Episioraphy*. This operation has been proposed by Dr. Fricke, of Hamburg, and put in practice by Professor Geddings; for what purpose? Not for restoring the uterus to its original position, as I shall shortly show you, but merely to prevent a prolapsus from becoming a procidentia uteri, by forming a stricture at the vaginal outlet; the operation consists in removing a portion of the integuments from both labia, and bringing them together by the quilled suture: whilst the adhesion is going on, the uterus is kept back by a sponge, which is withdrawn a tertile adhesion is complete; of course the uterus falls as low in the vagina again as it can do for the contracted outlet. Now I fearlessly assert, that not one iota of real advantage is gained by this painful operation, any farther than preventing a prolapsus becoming a procidentia; the uterus is allowed to continue in an unnatural position, distending the vaginal coats. The inventor of this operation makes a strange assertion, which I am perfectly at a loss to understand: he says—"Should the operation fail, it may be repeated, and it possesses this most important advantage, that it can be performed at any period of life, as it does not interfere with menstruation, conception, or child-bearing." I do not imagine menstruation, or conception, impossible under such circumstances, but I am certain it would be prejudicial to both; and still more, in respect to child-bearing. I appeal to every experienced accoucheur, if he would like to attend in cases where the labia have been sealed together by such an operation.

Actual cantery.—Dr. Lawrie, of Glasgow, has introduced a still more cruel (and in my opinion), ineffective operation, that is, the actual cantery; and I feel convinced, in my own mind, that if the case I am about to recite was the only one I had ever studied in respect of the treatment of this disease, it would fully justify me in attempting every means towards curing it, without having recourse to such operations; the case is this:—Christian M'Lean, *ret.* 18, was operated on by the actual cantery to the lateral surfaces of the vagina, for nearly the whole length, in consequence of a prolapsus uteri, on the 2nd of October, 1840, and kept in a recumbent position till the 13th of Nov. (about six weeks), soon after which she was discharged. But in July, 1841, the 25th, the prolapsus returned, when she was again operated on by cantery, and kept in a recumbent position till the middle of April following, a period of nearly thirty-eight weeks. Three months after this, says Dr. Lawrie, she was doing well, and this is called a cure by actual cantery; but as it returned in under nine months after the first canterization, the three months after the second cantery is not a sufficient test. I feel some degree of hesitation in attributing the cure in this case to the cantery, and think in a young person the recumbent position of six weeks at one time, and thirty-eight weeks at another, should have some credit in the transaction; as to the cantery, I must condemn it as an unfeeling and cruel operation; it in no degree restores the uterus to its normal position, but merely prevents its protrusion by forming a stricture at the outlet of the vaginal canal; a circumstance affording no very comfortable prospect to a young female, who might have to bear children afterwards, or to the accoucheur, whose lot it might be to attend. An operation of this nature

cannot be justified for such trifling advantages when so many serious circumstances may arise in future.

(To be concluded in our next.)

MESMERO-PHRENOLOGY.

By HENRY G. ATKINSON, Esq., F.R.S.

THE facts of mesmero-phrenology* consist chiefly in the power of throwing persons of peculiar constitution, with regard to nervous susceptibility, into a state of somnambulism, or sleep-waking; and in such condition, of exciting or paralyzing the different cerebral organs at will. There are several ways in which this may be effected, depending much on the peculiarities of the individual case; for the effects of mesmerism, of course, like all other effects, although traceable to general laws, are yet modified according to the conditions of the particular instance. One case will only resemble imperfect sleep; another will appear a completely altered state of existence: in one case you may have attraction to the mesmerizer, which in another instance may be wanting; one patient may exhibit clairvoyance, and not ultra-vision; the next ultra-vision, and not clairvoyance; and so on with regard to all the other phenomena. But, nevertheless, there is a general uniformity running through the whole; the cases may be classified, and many of the most essential conditions observed. But it is not necessary to explain further on this head; it is sufficient if I describe the general bearing of the subject, and my individual conviction of the fact,—not so much with the idea of convincing, as of inducing others to follow out the inquiry for themselves. In ordinary cases, there are several methods of exciting the organs, all of which I have practised with success. You may touch, or press upon the organs, and observe the natural language which may be exhibited, together with the exclamations which may accompany this, or you may engage the patients in conversation, by which means you may lead the mind at will—they will follow, with their hand pressing on the excited part,—and they will press the more firmly according to the degree of excitement in the organ; covering one or several, and taking the other hand, if they are not able to reach to a distant part excited in combination. This they will often do of themselves, or if once induced to do so, may continue the habit. A third method is to touch an organ, and ask for an explanation of the power which is manifested there; or you may picture any particular sense, and request to be shown where such is felt to be located, or require the analysis of any sensation, and by what combination it is produced, or if it be a simple power.

In some cases you may de-mesmerize organs, and thus bring them into action, or you may paralyze any particular power which may be acting. Music is another means which may be used; and many other methods of inquiry will, doubtless, suggest themselves to those engaged in these experiments. If any organs are much excited, they will no longer manifest their function with any distinctness and energy; the patient will complain of headache, and a strained sensation in those parts, and a desire to rest. You may excite the organs only on one side of the brain, and when they are becoming confused, you may continue the same feelings on the other side with renewed energy, just as you may tire one arm and then use the other. You may leave the patient in a talking dream, and observe how thought suggests thought, and feeling connects with feeling—how the organs become fatigued, and others become excited for relief, just as we change from one constrained position to another, perhaps the opposite, for relief. You may watch the effect of any single organ, and how it is modified when acting in combination, and observe the changes in natural language; all this was strongly exhibited in a case which I have had of a young lady, who

* The introductory remarks prefacing this paper being of a character more adapted to a general audience than to professional men, we have taken the liberty of omitting them. They form, as will be seen, no essential part of the subject.

exhibited clairvoyance in the most perfect manner. After playing at whist for half-an-hour, seeing the cards as distinctly as any of us in our natural state, with our eyes open, (her eyes were always quite closed, and it made her see more distinctly to cover the eyes with the hand, and press them firmly), she would become fatigued, and complain of pain in those parts which had been employed. In fact, we are hardly able at present to point out any limit to the information which may be obtained in these cases.

I have now stated, as briefly as I am able, the nature of those discoveries which I hold to be so important, and I am happy to know that there are some enlightened and fair-dealing men amongst us, who are disposed to pursue the subject; and I hope that phrenologists generally will feel the immeasurable importance of the question, so far as to lend their assistance in every possible way to further the inquiry. I have now had four very complete cases of mesmero-phrenology, and others exhibiting partial effects, but which become important when considered in reference to others. Mr. Gardiner has kindly afforded me an opportunity of seeing the patient whom he has experimented upon with such success in the Isle of Wight; a case which exhibits some of the highest phenomena of mesmerism, and was the first which exhibited mesmero-phrenology in this country. I have also seen two other cases through the kindness of Dr. Elliotson, but exceedingly interesting as far as they go, and which I hope will not be lost sight of.

But it is essential that all who really desire truth, should consider well the objections which might be raised against any experiments which they are carrying out; and believe me, gentlemen, that I am as anxious as any of you to bring forward any such objections, and to show them in the strongest light, that they may have their full weight and consideration, and be the better and the more completely answered—for truth is my only object—I have no other interest in the question; nor have I any love for the marvellous. I desire to reduce marvels into plain things, and not to inflate plain things into marvels. My experiments have mostly been performed before intelligent phrenologists and other scientific persons, and I have not yet heard any sufficient objection to what has been shown. Those who are engaged in the same pursuit, know that I have been anxious to seek out objections, and I shall now be the first to welcome any new light which shall show me that I have been in error. But no one can be thoroughly convinced of the truth of these discoveries, who will not observe and reflect and inquire for themselves; and it is much easier to deny the truth of any position than to analyse justly its real bearing and claim to consideration. Any one may object, but few can exhibit and appreciate the truth—the one requiring only enough self-sufficiency and conceit—the other entailing much labour and thought, even for the most truthful and able inquirer.

18, Upper Gloucester Place.

MESMERISM—MODES OF CONDUCTING THE OPERATION.

[For some time past we have been constantly receiving letters on this subject, and have therefore obtained the following practical observations from the experienced pen of Mr. H. Brookes, who, we believe is about to publish an original work on the subject. It offers a good pendant to the above.]

Mesmerism is now no longer the proscribed thing which, but a few short years ago, it was considered; safely and steadily has it proceeded to take its place in the ranks of science, and nothing can ever again turn it back. Numbers of enlightened and inquiring minds are now not only willing to listen to its claims, but anxious to test them by fair and honest experiments. This is amply proved by the numerous parties now daily experimenting in all parts of the kingdom, and by the numbers and character of those so frequently inquiring as to the modes of operating. This is the spirit in which the subject ought to be met; and anxious as I am to see the interesting and important truths of mesmerism generally received,

and believing, as I do, that the multiplication of the number of operators will most effectually conduce to that end, I most gladly avail myself of your widely circulating journal to disseminate the following practical observations:—

It is somewhat difficult to give an adequate idea of the various methods which may be adopted for inducing the mesmeric effects by a verbal description; personal observation of the process is decidedly the best; but to those who cannot avail themselves of that, these hints may be useful.

1. The operation is of rather too serious a nature to be trifled with, and should therefore never be performed or submitted to by way of frolic, nor unless the operator has a respectable knowledge of the physiology and pathology of the nervous system.

2. The operator should be in good health, and capable of concentrating his mind upon the object for a considerable period, and his nervous power should be greater than that of the patient; his power or facility of influencing will greatly increase with practice.

3. All persons are more or less susceptible, some in the highest degree, others in the least degree, and there is every shade of susceptibility between the two extremes. It is very probable also that some persons may be susceptible in a certain degree to one operator, and more or less, or not at all so, to another operator. Persons in robust health appear to be quite as susceptible as those in a state of disease; but of one suffering from epilepsy, hysteria, rheumatism, &c., is selected, the operator may, at the same time, satisfy himself of the curative agency of the process, as well as its power, and on that account it is advisable.

4. Without discussing the question of fluid or no fluid, the operator will find it useful and convenient to assume the existence of a transmissible force or power in himself, and subject to his volition, of which his eyes, or hands, or any pointed portion of his frame, may be conductors, and which by the force of his will may be propelled beyond the periphery of his own body into that of the patient. Some of the earlier mesmerists contended that the will alone was sufficient; others, that the manipulations alone were sufficient; neither position was, strictly speaking, correct, and as usual the true one lay between the two extremes; the manipulations are but the instruments of the will, and the will would operate but inefficiently without their instrumentality.

5. When about to commence the operation, the room should be perfectly quiet, and the patient comfortably seated in an easy chair, the greatest degree of passivity, and the utmost freedom from all disturbing influences are of course most advisable.

6. The operator may now stand before the patient with his arms extended, so that the points of his fingers almost touch the forehead, and hence make a regular succession of downward movements, and passes over the eyes, chest, and stomach, closing the hand each time the moment the downward stroke is complete, and carrying them up again closed, and this may be continued as long as his strength will permit, or it may appear advisable. The closing of the hands during the upward stroke is important, the neglect of it, as well as too strong or exclusive operating upon the head, are apt to produce engorgement in the vessels of the head, which may produce attacks of hysteria or epilepsy.

7. There are many other approved methods, some of which may in some cases be more effectual. For instance, the operator may seat himself before the patient, and place his hands on his, the balls of their thumbs being in close contact, and their eyes fixed on each other's, the operator's eyes being of course actively, and the patient's passively fixed; or the operator may use Dr. Elliotson's method, merely moving one hand briskly, with the fingers extended, down the face of the patient, nearly in contact, or simply point the fingers against the eyes too on each side of the nose, without any movement; or he may place one hand on the head or forehead, and point the other over the epigastrium; this will often be found an effectual method for producing an impression upon the patient, though it may sometimes be a sickly or disagreeable one.

8. The operator must never forget that the fixed look, and the passes or manipulations, are mere instruments only by which his mind operates to produce the effects, and not the power or force itself. He may continue the processes as long as he pleases at each sitting, and he need not be discouraged if many sittings pass without the sleep being induced. Sleep is only one of the many effects, and the individual may be beneficially influenced and even cured without it. I seldom find it advantageous or necessary to continue the operation more than a quarter of an hour, and usually produce sleep at the 3rd or 4th sittings. The sleep at first will probably be the "half sleep" or general torpidity of the motive powers, or it may be the perfect sleep with torpidity of both the motive and sensitive powers.

9. The patient should be suffered to enjoy his earlier sleeps without interruption. When the operator wishes to wake him, he should place his two thumbs on the inner side of the eyeball, and draw them slowly outwards, pressing slightly on the eyeball as he passes over it, and then breathe or blow strongly on the eyes and forehead. This method was prescribed by one of my sleep-wakers, as applicable in all cases, and I have never known it fail.

In a future number, I shall be glad to offer some further hints, &c.—I am, Sir, your obedient servant,

W. BROOKES.

THE EDINBURGH UNIVERSITY.

To the Editor of the 'Medical Times.'

SIR,—I am happy to have it in my power to communicate to you and your readers the intelligence, that we are at last in the way of getting our university regenerated. "Better late than never," is an old, but nevertheless true proverb; and really this change has just come in time, for matters were coming to such a pass, owing to the inefficiency of some of our professors, that there would have been no calculating the extent of injury which would have been inflicted on our Alma Mater, by a persisted continuance of what has, times without number, been declared to be detrimental in the extreme to its best interests. It is to be hoped, that the following communication will prove to be a prelude only to a more extended change, which cannot but materially assist in everything which is beneficial to the well-being of the profession.

The Town Council met on Tuesday, the 9th of August, when a letter was received from Dr. Home, Professor of the Practice of Medicine in the University, to the following effect:—

"Edinburgh, August 8, 1812.

"MY LORD,—Having for forty-five years discharged the duties of the Chairs of Materia Medica and Practice of Medicine; considering, also, that from my very advanced age (although still enjoying the most perfect health) I am become unable to perform the important duties of the Professorship which I now hold; also, wishing before I go home to have some time free from my laborious duties, I have for some time intended, and now herewith offer to your Lordship and the other honourable Patrons of the College, to resign the Professorship of the Practice of Medicine, on condition of your providing a retiring allowance of £300 sterling *per annum*, and making such other arrangements as may seem necessary for securing the requisite payments of the said allowance during my life.—I am, &c.

"JAMES HOME."

"To the Right Hon. the Lord Provost."

A very modest request; but, no doubt, the patrons were glad to take the offer on any conditions for the sake of the college; and, accordingly, Dr. Home's resignation was accepted, and the stipulated terms agreed to. It was then unanimously resolved upon to offer this chair, now vacant, to Dr. Alison, Professor of the Theory of Medicine, by whom it was accepted in suitable terms. It is subject to the burden of £150 of the allowance of the retiring professor. The vacant chair of the Theory of Medicine to be filled up on the 20th of September next.

This was the appointed day also on which a successor to Dr. Thomson, formerly Professor of Pathology, fell to be appointed. Dr. Bennet's letter, declining to proceed further in the contest, was read at the commencement of the proceedings. Three candidates were proposed, viz., Drs. Craigie, Henderson, and Handyside, severally lecturers here. The roll having been called, Dr. Craigie had 12 votes; Dr. Henderson 11; and Dr. Handyside 10. Dr. Handyside, having the smallest number of votes, was then struck off. A second vote having been taken between the two remaining candidates, Dr. Henderson was declared to be elected by a majority of 17 to 16.

Professor Henderson commenced lecturing on Practice of Medicine a few years ago, in the School of Medicine, Argyle-square, Edinburgh; and since then his lectures have met with most deserved success, the number of students attending them being much above those attending the other lecturers on the same subject; evidencing the high respect in which his superior qualifications as a teacher are held by his medical brethren. We have no doubt but that he will reflect credit on the choice of the Town Council, and will add, by his exertions, to the increasing celebrity of the College of Edinburgh, of which he is now one of the professors. A few more such and we shall not be afraid of success.—I am, Sir, your very obedient servant,

THETA.

Edinburgh, August 11, 1842.

URTICARIA.

To the Editor of the 'Medical Times.'

SIR,—With your permission, in answer to several correspondents, who request to be informed of my method of treating "Urticaria," I beg to reply through the pages of the MEDICAL TIMES. I order for an adult a wine-glassful of the following mixture:—Aloes soc. rhubarb and jalap a. 3ij; Aqua Dj; mix. Every afternoon of Pulv. ipecac. comp. grs. xij, and if persevered in for the space of two or three weeks, with due attention to diet, rest, and any peculiarity of system, rapid progress is made, and ultimately a perfect cure.—I am, Sir, your most obedient servant,

J. H. HORNE.

MEDICAL REFORM.

To the Editor of the 'Medical Times.'

SIR,—I have read with attention the article which appeared in the MEDICAL TIMES of the 6th of August, headed Medical Reform, and purporting to be "A plan for Establishing one Examining Board in Scotland for Licensing General Practitioners, &c.;" and the result of that perusal is an inclination to offer to your readers a few observations thereon, for which I hope you will find a corner in your paper. If we are to have Medical Reform pure and unadulterated, we must have no selfish interference from any one, for as surely as we allow anything of this nature to have weight with us in any proposal which may come from a body of men, qualified by the approval of the enlightened portion of the profession with which they are more immediately connected, to ponder over and propose the best means for securing this much required reform, so certainly will there be some of the poison of this selfishness introduced to contaminate and render totally inert the remaining healthy parts. Moreover, we would most earnestly press this upon those who contemplate such an interference, that if they have respect for themselves—if they have a sincere wish to see the medical profession raised to that state in the public eye, from which it has so long and so unjustly been alienated—they should refrain from intermeddling in any manner or way until they can grapple with palpable and tangible objections in the proposals or plans of these qualified bodies of men; for doing so before these occur, they will only render reform more difficult—create opposition where otherwise there would be none, and expose the whole—measures and men—as a laugh-

ing-stock to the enemies of such a reformation. We would hardly imagine this caution necessary, did we not both hear and see, that in certain quarters of Scotland there are murmurings of discontent and disapproval at proceedings which have taken place in the Colleges of Edinburgh. In these proceedings, we may assure your readers, there is as yet nothing at which to take alarm, for, although they (the colleges) consider that certain measures would be essential to the well-working of a general medical reform, yet they have proposed nothing positively; and it is wrong, very wrong in any one—be his intentions bad or be they good—to endeavour to create dissension amongst the friends of this reform in any part of the country. But it is a fact, not often taken notice of, but occurring frequently enough, that in every age there are men to be found who, the moment any scheme is whispered for the bringing about a specified object, from which they believe advantages are to be derived, either to themselves or to the world at large, set about with, perhaps, well-intentioned zeal and energy to promote to the utmost of their power its accomplishment, but who never, it would appear, bring to their recollection, that there is a possibility of their protracting, if not altogether preventing the consummation they, and many others besides, so much desire, by thus blindly and prematurely expending their labour and influence before they obtain a certain knowledge of the exact bearings of the plan in question, or even a sufficient knowledge of the plan itself. Of such individuals at the present day there is no scarcity; but whilst we would unhesitatingly give them due credit for their sincerity and philanthropy, we would at the same time most strenuously enter our *caveat*, that they

"O'erstep not the boundary of prudence"

in their anxiety to do good, and thereby frustrate the calm prudential endeavours of those who are labouring for the same great end, and whose deliberations must be carried on with much more caution and discrimination than can be exercised by any one isolated individual. Amongst this class we must, however unwillingly, place the author of the plan previously referred to, for it is evident, from the vagueness and obscurity which accompany many of the expressions, that it has been drawn up in haste, and without a sufficiency of certain data to go upon, and also without a due consideration of the future operation of some of the most important of the propositions—faults not altogether worthy of the *high* source from which it emanates. This is also apparent from some of the statements in it, statements which might lead to very erroneous ideas of the powers of the Royal College of Edinburgh; and there are others from which most absurd conclusions could be drawn. To particularize those would only give rise to unprofitable discussion; and we shall, therefore, proceed to consider this plan for the Establishment of a Board of Examination in Scotland, although, we must say, it would have appeared to better advantage had its revelation been delayed until a future period, when we would have had proposals of schemes from more authorised sources with which to compare it. As it is, however, we must be content to review it by itself, or, at least, with one which we would humbly place by its side.

The "Professor of Marischal College and University of Aberdeen" proposes, that the Board of License should consist of eight individuals, chosen in proportion to the number of medical professors connected with each college, so that the University of Aberdeen, with its four, would have the privilege of sending six members in the course of seven years (*vide note*), and the others in the same ratio. Now, an objection raises itself immediately to this proposition in the form of the following questions:—Where would such individuals be found who would sacrifice their time and money to come at stated periods, from the different quarters of the universities, to form this central board? Would they themselves, or would the colleges, with which they were connected, on their own responsibility, liquidate this expense, which would in the course of a year amount to no inconsiderable sum? If a central fund, as well as a central

board, be established and this debt fall upon it—would not this unnecessary waste of its money be better applied, either in supporting a board otherwise appointed, or in some more profitable manner? Even admitting the practicability of this proposal, and that the attending expenses would be discharged independently of the assistance of a general fund—would the business be better carried on by the representatives of each university—or, would it not be just as efficiently discharged by a board composed from those in the place in which it was resolved to hold its sittings? These, with many others of a similar nature, would require to be maturely considered before any such plan is proposed; or, although they may seem at present to be of no great consequence, yet when all the other arrangements had been entered into, they might form a very serious obstacle to the operation of the whole. If, however, they can be satisfactorily disposed of, we would be inclined to enter so far into the professor's scheme, with a variation as to the method of election and number of the board. We would propose, that the number should be *ten* instead of eight, that the colleges should each be allowed to send one representative, which counting two for Edinburgh, and one for the others, viz., Glasgow, Aberdeen, and St. Andrews, (which last, by the way, the professor has forgot to include, although it possesses men and produces students in no way inferior to its more northern neighbour) would amount to five; and that the remaining five should be elected by the profession itself, through the medium of a committee of selection appointed in a similar manner. By this means, all connected with medicine would be represented in a satisfactory manner; and they would also have it in their power to counteract any influence which the university representative might wish to exercise for their own advantage, and against the interests of the profession at large.

We submit these observations to the readers of the MEDICAL TIMES for their support. The plan itself is well adapted to promote in the most certain manner the great objects of "Medical Reform;" and none, it is conceived, untainted by party or selfish motives, can with reason be opposed to it. So far as we are acquainted with medical affairs in England and Ireland, we think that its general tenor might be adopted with advantage there also, but of course altered in such a way as to omit the localities of each. There is one essential feature which must be embodied in whatever plan is selected, and that is, protection for the profession generally against any invasion by a superior power. The whole body of practitioners must, either by the representative system, or by some other means more effectual, have a share in the proceedings of all assemblies met for the purpose of superintending their interests. These, from past experience, we cannot again surrender unconditionally into the hands of any body of men, to do with them as they may—they have suffered too much already from this cause, and we cannot—we dare not hazard them a second time.

In conclusion, we may, in a few words, advert to the Professor's *courtesy* in speaking of the University of Edinburgh. It would have served his purpose much better had he rested his university's claims to attention on its own individual merits, and not on a comparison, as to services and zeal, with one of acknowledged superiority, both as regards past and present services to the medical world. We admit the usefulness of "the Marischal College and University of Aberdeen" in its own sphere—out of that sphere it never can be connected, "in fame or in name," with the College of Edinburgh. Comparison is always a dangerous field to enter upon, for it invariably places either the comparing or compared in an unworthy position, although, apart, both may be very worthy objects of admiration, if not imitation. The Professor may now be able to distinguish in which of these two positions he ought to stand.—I am, Sir, your very obedient servant,

THETA.

Edinburgh, August 11, 1842.

HYPOCHONDRIASIS WITH DISCHARGE OF CRYSTALS OF OXALATE OF LIME.

By G. BIRD, M.D.

ON Feb. 15th of the present year, I was consulted by Mr. W. Stone, in the case of Mr. B—, a gentleman residing in a densely populated district of this metropolis. He was a remarkably fine man, about thirty years of age, of dark complexion, and whole expression strongly characteristic of deep melancholy: he was highly educated, and appeared to have painfully susceptible feelings. It appeared from his history that, until within the last four years, his health had been excellent; at that time he contracted a sore, which was regarded as syphilitic, and so treated, with *inter alia*, abundance of mercury and iodine, which appeared to have aided in bringing on an extremely cachectic condition. Partially recovering from this, he left England on an eastern tour. He visited Malaga, Egypt, and returned to England *via* Constantinople. At each of these places he underwent treatment for what he regarded as a return of venereal symptoms, apparently only manifested by relaxation of the throat producing hacking cough. At the latter place he fell under the care of Dr. Mac Guffog, who evidently took a very correct view of his case, and he received decided benefit from his treatment. At last, wearied and dispirited, with an irritable throat, bearing about with him what he regarded as a venereal taint, and tired with wandering, he returned to England, a prey to the most abject hypochondriasis. When I saw him his naturally expressive countenance indicated despair: he complained bitterly of the inefficacy of medicine, and seemed only in doubt whether he were doomed to die of syphilis or phthisis. The pulse was quick and irritable; tongue morbidly red at the tip and edges, and covered in the centre with a creamy fur. He had lately lost much flesh; he was troubled with a constant hacking cough, which evidently depended on an enlarged ovula; for on examining the chest I could not succeed in detecting any evidence of disease. There was extreme palpitation, increased by eating and by exercise, much flatulent distention of the colon, with pain between the shoulders, across the loins, and over the region of the stomach; extreme restlessness, and nervous excitement accompanied every action. The bowels were inclined to be constipated; urine copious; appetite rather voracious, but unsatisfying; skin acted imperfectly.

Feb. 15. The urine passed last night was acid, pale, of specific gravity 1.0295, contained much mucus, with abundance of flesh-coloured urate of ammonia in suspension. On warming a portion, so as to dissolve the latter, a very copious crystalline deposit of oxalate of lime, in *cuboid* crystals, was rendered beautifully visible by the microscope. A large excess of urea was present, the addition of an equal bulk of nitric acid rendering some of the urine placed on a watch-glass nearly solid in ten minutes. The urine passed this morning was precisely similar.

R. Acid. Nitrici. Acid. Hydrochlor. aa. ʒj.;
Inf. Serpentariæ, ʒxj.
Syr. Zinzib. ʒj. M. cap. ʒj. ter die.

R. Ext. Aloes Pur. gr. ij.
Conf. Opii, gr. iij. M. ft. pil. o. n. s.

Allowed a bland nutritious diet, with three glasses of old sherry daily: no vegetables, butter, or sugar.

27th.—Has continued the treatment up to this date with very marked improvement; his expression is now cheerful; bowels act freely and healthily; pain much less; skin active; throat not so troublesome.—Pergat.

The night urine was now of lower specific gravity, being 1.020, scarcely containing an excess of urea: a slight deposit of urate of ammonia was present, mixed with but a small quantity of oxalate of lime in crystals. The morning urine contained less of the oxalate.

He continued this treatment patiently and persistently until March 20, when he was so much better that he desired to take a country trip. I discontinued his medicines, and ordered him a mild tonic aperient draught occasionally.

May 1st.—I again saw this gentleman. He has

gained strength, flesh, and spirits: he only complained of occasional headache, and a dread of a return of his ailment, and is anxious to break through his restrictions of diet. The urine now contained no excess of urea, and was nearly free from oxalate of lime. An occasional aperient was ordered him.

June 4th.—He again called upon me: he is free from disease, and his most pressing evil seems rather to arise from a lurking dread of phthisis than aught else. The urine is natural.—*Medical Gazette*.

ON THE APPLICATION OF GALVANISM TO SEVERAL DISEASES.

By H. BERGMANN, Surgeon, of Belgium.

(From the Medicinische Zeitung.)

CASE 1.—In the month of December I was called to the daughter of an Innkeeper near Strehlas, æt. 24 years, who suffered from palsy on one side of her face. I found the whole of the right side, together with the tongue itself, rigid. The patient had already used a great number of remedies without success, but still she expressed herself willing to follow my advice, and accompanied me to my house. On arriving there I immediately vesicated the space above the right eyebrow, and applied the galvanic current to the abraded surface in the following manner:—Having dipped the negative pole into a solution of strychnia, I brought it into contact with the abraded surface, at the same time that the positive pole was applied to the tongue. As the patient complained of violent pains, I could only persist in the experiment for a space of ten minutes. She then went to bed, and the next morning when I paid her my visit, she told me, quite overjoyed, that she could masticate, and swallow without the least inconvenience, and that she felt herself, generally speaking, quite well. The experiment was afterwards repeated once a day during the ensuing week, and without the application of any other remedy whatsoever the patient was discharged on the ninth day radically cured.

CASE 2.—I have also made use of this remedy in a case of cicatrix on the surface, or between the layers of the cornea. I applied the negative pole to the scar, and the positive pole to the tongue. The hardened swelling was immediately dispersed. Should the size and strength of the cicatrix render it necessary, the remedy must be applied more frequently.

CASE 3.—Only once have I tried the remedy for cataract, and very fortunately to a man 28 years of age. I do not think I shall ever have recourse to it again; for I do not think I ever saw a more violent inflammation than that which supervened to the application; a coincidence which I could easily observe, having operated on twenty-one cataracts last quarter.

The manner in which I proceeded was this. When the battery of four pair of cylinders was arranged, and when its action became perceptible, I attached a needle to the negative pole, and with the former I pierced the eye, as far as the lens, in which position (having completed the circuit) I kept it for a space of two minutes, during which the patient experienced most excruciating pain. On removing it he declared he could now see much better, and was able to distinguish any large object quite clearly. The lens had burst, and therefore one could see into the interior of his eye. The wound occasioned by piercing the eye healed in three days, but left a cicatrix. Now, however, such a state of violent inflammation supervened, that I was under the necessity of bleeding the patient thrice in one day, and moreover to employ general antiphlogistic treatment, having to deal with a man of very full habit. Although I was obliged to discharge my patient in about three weeks, and that he could see much better, yet he shunned as much as possible the light.

APOTHECARIES' HALL.—From the annual report just made, it appears that during the past year three hundred and ninety-three candidates have been examined, and three hundred and thirty received certificates of their qualification to practise as apothecaries.

THE INCIPIENT STAGE OF CARCINOMA UTERI.

DR. MONTGOMERY, of Dublin, states, the first discoverable morbid change, which is the forerunner of cancer of the uterus, takes place in and around the muciparous glandulæ or vesicles, sometimes called ova nabothi, which exist in such numbers in the cervix and margin of the os uteri. These become indurated by the deposition of scirrhus matter around them, and by the thickening of their coats; in consequence of which, they feel at first almost like grains of shot or gravel under the mucous membrane; afterwards, when they have acquired greater volume by further increase of the morbid action, they give to the part the unequal bumpy or knobbed condition, like the ends of one's fingers drawn close together. Dr. Montgomery does not admit that the fact that cancer uteri sometimes commences in the upper part of the organ militates against his opinion, because these follicles are generally supposed not to exist there, inasmuch as he possesses several preparations in which their existence in that part of the organ is clearly demonstrated.

The diagnosis is rendered more easy by the existence in a great majority of cases of a decided fulness or a distinct tumour in one or other iliac fossa, with fixed pain and tenderness traceable to, and as it were issuing out of the abdominal ring, more or less irritation of the bladder, with dysuria, irregular menorrhagia, and after a time impaired appetite, disturbed sleep, wasting, &c.; and, on examination, the margin of the os uteri is found to be hard, irregular, projecting, and often slightly fissured. The cervix is in most instances slightly enlarged, and harder than it ought to be, and there is a feeling of small shot or gravel in the direction of the muciparous glands.

At this stage, the morbid changes appear to be confined to the os uteri and lower portions of the cervix, and may thus remain for years before the second and hopeless state is established. During this time the patient experiences only comparatively slight and transient attacks of pain, or perhaps only sensations of uneasiness, referred often to the situation of one or other of the ovaries, or about the os uteri, with anomalous tingling along the front and inside of the thighs; these last for a few hours, or a day or two, and then disappear, perhaps for weeks, but again and again return in the same situation, and for a long time are not increased in severity. The patient finds that sexual intercourse now occasionally causes her pain, which she ascribes to some deep-seated part being touched, and the act is followed by an appearance of blood; she is also often troubled with slight irritability of the bladder; but the appetite, digestion, and sleep, may for a long time continue good, and the pulse generally gives no indication of the existing disease or its changes—in short, the general health may long remain quite undisturbed, nor has the patient, in many instances, the slightest suspicion that there is anything seriously wrong with her, nor thinks of seeking for medical aid until she is induced to do so by the solicitations of her husband or some anxious friend.

The treatment Dr. Montgomery recommends, is the repeated local abstraction of blood by cupping or leeches, the latter applied as near the organ as possible, and the administration of mercury, when not contra-indicated, so as to bring the system very gently but decidedly under its influence, for which purpose it may be combined with iodine, in very minute proportions, with camphor, opium, hyoseyamus, or hemlock, and occasionally by friction, espe-

cially where there exists evidence of inflammatory action in the iliac fossa. The iodide of iron and arsenic may be afterwards had recourse to with advantage. Counter-irritation by the successive application of blisters over the vicinal parts is also useful. The warm bath, and warm hip-bath are recommended by Dr. Montgomery, and he says that their effect in soothing the uterine irritation will be materially aided by passing a metal speculum with lateral perforations, so that the fomentation may be directly applied to the parts diseased.

After the removal of the congestion and organic changes from the os uteri, there remains occasionally a sensitiveness of the parts, which causes the patient much discomfort, and will be best relieved by the use of the bath, as above directed, conjoined with anodyne applications to the parts, or the nitrate of silver in solution, the best mode of applying which is by means of a glass tube of above an inch in diameter, with a funnel top, and bent near its middle at a right angle. The lower arm should be from three and a half to four inches long, and the upper from five to six inches in length: in substance it should be about one-eighth of an inch thick, and the margin of the vaginal end should be perfectly smooth and rounded, by being fused at the furnace, and not by cutting at the wheel. This instrument the patient can introduce and manage for herself. The patient should be strictly enjoined to avoid every thing that can stimulate the uterus, such as horse-exercise, sexual intercourse, &c. Her diet should be plain, moderate, and unstimulating—wine, malt liquors, &c., are to be avoided.

Dr. Montgomery is of opinion that the affection here described is the first stage of cancer uteri; that its existence is indicated by symptoms and organic changes sufficiently marked to attract our attention, and cause its discovery or examination; that if not arrested promptly and decidedly, it will pass into an incurable condition; and that it has been, and therefore can be arrested by suitable treatment, and the patient saved from the lingering agony to which she must otherwise fall a victim.—*Abridged from the Dublin Medical Journal.*

TO CORRESPONDENTS.

Medical Etiquette.—Mr. W. Reeves, surgeon to the Carlisle Dispensary, calls our attention to a case of patient-stealing, accompanied by calumnious depreciation, which he attributes to Mr. Elliot, surgeon, of Newcastle, through the latter's assistant. The patient laboured under stone, was told so by Mr. Reeves, and recommended to submit to lithotomy. The assistant warned him of the danger, was sanctioned by his master, who essayed the cure, declaring that there were two stones. The latter himself operated at length, cut down upon the membranous portion of the urethra; dilated the prostate, and took away one small stone.

G. S.—Next week.

An M. P. is thanked for his interest; the subject, as he says, belongs to our profession—and we shall do our duty by it.

V. W., Dr. E., Mr. M. H., A Country Surgeon, Beta, Dr. W., Mentor, Enquirer, Mr. H. P. T., respectfully declined.

Partus, The case of wounds, Mr. H.'s letter, Dr. D.'s communication, with several others, under consideration.

M. B.—The difference just now may as well be passed over.

Dr. W.'s offer declined with thanks.

For a Fair Correspondent.—We have not forgotten the Doctor's work, and with such a memorialist, can not.

We have been obliged to abridge considerably some of our correspondents' favours.

* * Our Subscribers are informed, that the rule is to pay in advance. There are several subscriptions which (expected for some time) have not yet reached us.

THE MEDICAL TIMES.

SATURDAY, AUGUST 20, 1842.

Virtus est vitium fugere, et Sapientia prima Stultitiæ caruisse.

A HUNDRED correspondents—a host that Mr. Guthrie may be proud of—object to our estimate both of the character of the ex-President and the value of his services to the profession. While all admit the fair spirit in which we canvassed the old surgeon's merits, we are told that “from the COWARDLY and unjust secresy-system of the bigots of the Council,” our facts are not strictly correct,—that we have made Mr. Guthrie answerable for faults, which were perpetrated by his more antiquated and prejudiced colleagues, and against which his voice and vote repeatedly protested—and that, in truth, if the proceedings of the secret junto had been exposed to the profession's observation, we should have recognised in him one, who, to the earnest efforts for minor practical improvements which note a Joseph Hume (whose *sobriquet* he received from the discontented maliciousness of his less liberal partners), added the large, enlightened policy, as to general government, which distinguished a Locke, a Somers, or a Grey. If our correspondents be right and we wrong, we have here a vivid illustration of the mischief of keeping bad society. If Mr. Guthrie really thought that “the funds of the College should be made far more subsidiary to the purposes of Medical Education, and far less subsidiary to the purposes of the Council's individual gain”—if he truly laboured to make the Court of Examiners a reasonably competent body, one that might, without self-condemnation and blushing shame and confusion, examine the pupils of a Sharpey, a Todd, or a Hunter—if he sincerely felt an anxiety, as we are told, that the proceedings of the Council should no more skulk in darkness, but be shamed into decency and enlightenment by the free gaze of the members—if he faithfully, as he himself tells us, believed it a grievance that the Council should be self-elective, in other words, that it should cease to be a perpetuated and changeless receptacle of personal spleen and sectarian and selfish exclusiveness—if he veritably, as several correspondents tell us, wished to admit a large portion of the members to the privilege of self-government, through the noble principle of representation—then we must take the liberty of telling him and his friends in return, Mr. Guthrie had no business in the Council Chamber of the College, and still less business in its Presidential chair. However agreeable he might be personally to his colleagues, he was, if truly consistent, separated from

the majority by the impassable barrier of principle: his place was not in their ranks, but ours—not at their head, but ours. The fault of the misrepresentation is not ours nor the profession's; it exclusively lies at the door of the ex-President himself. The fault is the natural consequence of a still graver fault.

No time, however, is too late for repentance; and if Mr. Guthrie even now flee out of Babylon, he will receive from us a hearty welcome. If he would bring the most acceptable of peace-offerings with him, let him boldly insist at the earliest meeting of his colleagues on the IMMEDIATE adoption of every one of the *great* improvements his friends say he advocates,—as far at least as the charter, *directly* or *indirectly*, can be made to sanction them,—and if met with a refusal, let him, *by an immediate resignation*, give the *coup-de-grace* to a bigotted and miserable system which has already been placed in *articulo mortis* by the unanimous execrations of the profession and the public.

Sancte et Sapienter.
KING'S COLLEGE MOTTO.

SHAME has shown her blush! The officers of the Thuggist Hospital, “assuming a virtue if they have it not,” have agreed, we are informed, to petition Parliament for the closure of the fat grave-yard—their unfortunate patient's “Look out” of death. We congratulate the public no less than ourselves in this unhoped-for result. It is something achieved to have made the King's College gentry decent, albeit, at the expence of their consistency; for this last act of theirs, their first towards decency, places them before us in the ludicrous aspect of a body getting into a hole with due deliberation, and then petitioning Parliament to help them out it.

If Dr. Todd petitions Parliament against a nuisance which he designated before its Committee “as a great advantage,” it is scarcely wonderful that others who consider themselves as its victims are pursuing the same course; and we present the authorities of the hospital with a statement, which, while throwing considerable light on the eligibility of their carefully-selected hospital site, and supplying them with rather striking illustrations of some of our former remarks, may serve to furnish them with topics of great interest, and great argumentative force in the Petition which they are about to prepare for Parliament. The document is natural and naive; its inappreciably artless expressions, evidently the frank overflowing of a bruised and good heart—speak more potently against the Portugal Street abomination than the most laboured invective, or erudite dissertation.

To the Honourable the House of Commons in Parliament assembled.

GENTLEMEN,—It is with the greatest regret I have to send you the particulars of an outrage committed upon the dead, the relatives of whom

no doubt imagine that they are sacredly deposited in the burial-ground belonging to the Parish of St. Clement's Danes, situated in Portugal Street, Lincoln's-Inn-Fields. Having been given to understand that an inquiry is now pending before your Honourable House touching these particular circumstances, I trust that this information from so humble an individual as myself may not be deemed unworthy the notice of your Honourable House; indeed, I should consider that were your Honourable House aware that I had been an eye witness to the disgraceful scene which I am about to relate, and would for a moment hesitate to send you the relation of the facts, that you would consider me unworthy to mix in that society for which I have been educated, though severe and unforeseen misfortunes have reduced me to my present unfortunate situation in life; yet I am resolved to expose, as far as in my power lies, such scenes as are continually taking place, and at which my very heart and nature recoil; and I am sure your Honourable House will give me credit for so doing. My name is John Henry Stanton; I reside at No. 40, Clement's-lane, Clare-market, am at present a labourer, employed by Mr. John Gore, Hay-salesman, and Parish Contractor of North Wharf-road, Paddington. About a fortnight ago, as I was passing the burial-ground above alluded to, on my way home, my attention was turned towards "Watkins," the grave-digger, (whom I have known for some time,) digging a grave by the wooden palings of the ground. I observed several pieces of coffin thrown up (which could not have laid long in the earth, as the calico furniture appeared quite fresh) and placed on the platform erected for the mourners to stand upon, being first covered over with the earth so as to hide them from minute inspection; in a few minutes several pieces of flesh were thrown up, and covered in a similar manner; he then appeared to me to be labouring in the grave a longer time than would be necessary to throw up the earth in the usual way, and then would follow several parts of a body, having been previously mangled in the grave. I called loudly to him, and he, finding he was noticed, walked to the further end of the ground, having previously taken the precaution to cover over with the earth what he had previously done. I could not then obtain any official assistance, or I should have done so, and having mentioned the circumstance to an acquaintance, I was advised to lay the statement before your Honourable House. Gentlemen, I have a daughter buried in this said ground last January, to defray the expenses of which I exerted every nerve rather than ask the parish to do so; I have watched that grave with the fearful expectation of seeing the corpse of my beloved daughter mangled in the same way, and I can expect no otherwise than she will share the general fate. I do sincerely hope that Providence may so guide the minds of your Honourable House, that you may take the general cause into your most serious consideration, and adopt such measures as in your wisdom and judgment you may think most fit to put a stop to such heart-rending transactions, and for which (amongst the many others) your humble Petitioner will ever pray.

JOHN HENRY STANTON.

This subject is now exciting a very lively interest in every part of the country. In the *Bristol Mirror* we observe an able document from Dr. Farebrother, proving that medical men in the provinces are taking an active part in the agitation after the great social improvement, to which our pen has

been so frequently devoted. The following extracts will not be deemed of unimportance by the reflective portion of our readers. Dr. Todd will ponder on it with as much advantage to his stock of humility as of knowledge; it proves that no *practised* physician can express an opinion in the subject which does not come in unfortunate collision with his. To be wrong, in a man of science, is always vexatious; to be *alone* in wrong, must be maddening.

Since the attention of the public, and more particularly that of medical men, has been aroused, a vast quantity of information has been gathered, and the subject is now so far elucidated that it may be safely said there is no difference of opinion in the medical profession as to the general principle, that the practice of burying the dead in the midst of a dense population is one of the chief causes of the deterioration of the public health, by encouraging the progress of various pestilential diseases; and it is now considered as an established axiom, that the mortality increases, *ceteris paribus*, as the density of the effluvial poison generated, and not strictly as the density of the population. That this should prove to be the case is not surprising, when we reflect that of the atmosphere in its pure state only one-fourth part is capable of supporting life, and the mass of decayed animal and vegetable matter, and other noxious remains, with which the drains and receptacles are filled, together with the putrescence constantly arising from the heaps of dead in the churchyards, generate foul and poisonous gases, which imperceptibly diffuse themselves with the surrounding atmosphere, deeply tainting, if not altogether destroying its power of sustaining life. Still, comparatively little has been done to remove the causes of this great evil, and but little is thought of its effects, till some wide spread pestilence, such as the cholera, comes and sweeps off the population by thousands; then the whole community is in motion, and vast but temporary efforts are made,—the dwellings of the poor and wretched are visited, cleansed, and purified; but no sooner is the pestilence allayed, than all sink again into a state of apathy and indifference, as comparatively recent experience has shown.

PENCILINGS OF BY-GONE MEDICAL MEN.

SIR ASTLEY COOPER.

SIR ASTLEY COOPER!—word of magic to the English surgeon, interwoven in the inmost tissues of his being like its high correlative NAPOLEON to the soldier, how many pleasing reminiscences and hallowed associations spring bubbling o'er the saddened mind at the mention of that revered name—the name of one dear to manhood, dear to country, priceless, dear to science! The embodiment, during life, of his country's surgery to the world, as he will be of his age's surgery to posterity, his being and powers for decades of years was it were one of the world's best properties, less his than its, in which every human being, remote or near, held some valued interest, one which, unlike that vested in the celebrities of politics and war, was as marked by the universality of the benefits which attended it, as by the brilliancy of the talents in which it originated! Living among factions vile and unprincipled as ours, their venomous fang, as though fascinated by the magic of his goodness and genius, no more touched him than the Melitan viper St. Paul prejudices darkening in his day, as ours,

the medium through which the medical man saw his brother, the effulgence of his spotless soul shone undiminished athwart it, and all our parties, and classes, and journals, and factions, as if forgetting their own bad in the contemplation of his good, joined with those sure precursors of fame, the voices of the Continent and the New World, in raising to his honour that song of praise; which, taken up by our own generation and continued by its successors, shall never cease to be heard till posterity shall cease to be interested in the victories of science, and care no more for the great onward march of humanity.

The early career of Sir Astley Cooper was of the right sort. Circumstances were favourable to him, they aided the formation of a good character; they gave him the means of enriching his mind, and furnished him a fair field for the display of the good qualities of both. The fourth son of an excellent clergyman, and a talented mother, (the authoress of a novel which was called "The Exemplary Mother") he was born with a body predisposed to the good, and the systematic, which we think is almost the same thing, and with a mind of a capacity to take in an extended view of what the world placed before him, and examining them in all their relations to deduce the most rational conclusions. His parents were respectable, of the class to which the word *gentle* is, or ought to be, properly applied; he was accustomed, therefore, to notions which tended to make meanness, or *low vice*, revolting. They were not rich, or over-indulgent; he was, therefore, more or less thrown on his own resources, and the powers of his mind proportionally educed and exercised. At fifteen, he was subjected to the steady business-habits which a careful and just apothecary requires in his assistant, and was then brought in contact with the world in a way which is the most calculated to excite observation, force thought, and cultivate habits marked at once by sagacious caution and dignified decision. After two years of this useful discipline, the scene was changed to London, where the same duties in an extended sphere, under new circumstances, and assisted by the successive support and instructions of his uncle, a surgeon of Guy's Hospital, and of Mr. Clive, could not but have exercised the most salutary influence on a mind so well disciplined as that of the young Cooper.

Taking into account Sir Astley Cooper's native powers of mind, we have, in the little we have said, the secret of all his after success. By one coincidence and another, he found himself at manhood with all his habits good. He had little or no war to wage with himself, and could, therefore, with less distraction and more success wage war with the world. His bias being towards the right, he had a short cut to a just decision, which he could depend on when formed in a moment with as much confidence as another could on the resolution that took an hour's deliberation. Talk of ourselves and our own doings! We are little else, even the best of us, but what our education has made us; a rare lesson this of its importance! Show us a man of pure habits, and we will show you one of pure actions; present us one of sound habits and we will present you one of sound conduct; the reasonableness and morality of our actions depend so much on those of our habits, that without the latter we can only have the former by a rare—a very rare hazard. Those who demand a supernatural grace, to account for a complete change of heart, have more reason than many of them wot of. To-day's actions are, as to-morrow's will be, the result of years of influence; our habits are ourselves, and we our educations! Oh, how it yearns us

to hear some brainless parson, his hair a-frizz, his fingers ringed—ask “What hast thou, thou didst not receive, and if thou didst receive, why boastest thou of that that is another’s?” How much more truth is there in the text than he thinks of!

After receiving all the advantages offered by such an hospital as Guy’s, assisted by such teachers as John Hunter and Clive, the young surgeon, at the age of 20, went to Edinburgh, and there derived the profit which such unequalled industry and abilities might be expected to obtain at that time from one of the first anatomical schools in Europe. His displays at the medical societies which then abounded at Edinburgh, but particularly at the Royal Medical Society, while stimulating his industry, enabled him to raise high expectations of his future achievements. On his return—his apprenticeship was but just concluded—he was made Demonstrator of Anatomy to St. Thomas’s Hospital, and almost immediately afterwards he commenced giving a course of lectures on Anatomy.

In 1792, with a desire to acquire some knowledge of the state of French surgery, he spent some time at Paris, and was as remarkable as he had been previously at home for the assiduity with which he walked the hospitals, and attended the exercises of the professors. His obligations to Desault, the surgeon of the Hotel Dieu, were of the highest character, and were as freely acknowledged by him.

Returning from Paris, which the revolutionary horrors made no congenial abode to him, he established himself at about the same time (1792), and near the same place (Jeffrey’s-square, St. Mary-axe), as his friend and rival, Mr. Abernethy. Staying here six years, his practice increased to justify a removal to New Broad-street, and, in 1811, he set himself down in Spring-gardens as the most celebrated practitioner, with the largest practice of any surgeon of his day. We shall not dwell on the immense extent of his practice, his celebrity among the fashionable world, his successive appointments to court surgeoncies, or to the orders and titles which followed in rapid succession, from 1811 to 1841; it is enough for so general a memoir as ours, to say that during this long period he was *the surgeon of the day*; realising the largest income which any physician or surgeon ever did, or ever probably will realise.

We have been told amusing proofs of the esteem entertained by foreigners of the abilities of Sir Astley Cooper. Sir B. Brodie tells of a Spanish noble, who appointed a gentleman his medical attendant, solely from seeing Sir Astley’s name to his diploma. The celebrated black Chief of Hayti conferred a similar honour on an Englishman for a similar reason; and we have lately heard that one of his prescriptions for some unnamed malady, (which cost the present proprietor no trifling sum to purchase) has, after undergoing the scrutiny of the French faculty, got the rare honour of a patent from a neighbouring government.

Sir Astley’s style of writing is plain, straightforward, rough and ready as a soldier’s oath; the connexion of his sentences depends on his sense, not his language. His mind does not shape itself to phrases, but bends phrases to it: full, weighty, and powerful, like some ponderous locomotive, it pursues a free and unfettered course, breaking down or pushing on one side all the systematic idioms of the mother-tongue which impede or do not readily offer themselves to assist his onward course. His transitions, therefore, are often sudden, his turns of sentences abrupt, and whatever elegance of language, the *curiosa felicitas* of Horace, presents itself in his writings, comes unsought, and is

there by accident, and is as much out of place and out of countenance, as a courtier among clowns.

Besides an immense number of “cases” and articles of a more formal size, contributed to various works and periodicals, he wrote a work on Anatomy and Surgical Treatment of Hernia, a work made still more valuable from the able notes of Mr. Key, appended to the second and subsequent editions—a volume of surgical essays, the joint product of his and Mr. Travers’ labours.—“Illustrations of the Diseases of the Breast,” published in 1829, and which was left incomplete by the death of the author.—“Observations on the Structure and Diseases of the Testes,” accompanied by plates, published in 1831.—“The Anatomy of the Thymus Gland,” published in 1832.—A work on “Dislocations and Fractures,” published first, for the most part, in separate essays, and collected in a distinct treatise in 1822; a work which, invaluable in itself, has secured still higher value from the practical and erudite notes of the able gentleman who recently superintended a new edition of the work, we mean Mr. Bransby Cooper. Of Sir Astley Cooper’s lectures and contributions to the Transactions of the Medico-Chirurgical Society, to the Guy’s Hospital Reports, and other periodical publications of the day, we are only by our space allowed to say, that they register nearly every surgical improvement of value (with most of which his own name is imperishably interwoven as discoverer or parent) made during his day, and lay down, and what is of more value, fix those sound and standard principles in the diagnosis and treatment of surgical diseases which, as followed or neglected, offer the certain scale of a surgeon’s usefulness or bane to society.

The great feature in Cooper’s character was undoubtedly his common sense. His genius was the genius of common sense. What he spoke and did, he spoke and did in proper time and place; the very brilliancy of his talents shone but in their proper season. Preserving in all its vigour the intellect nature gave him, unlike Abernethy, he suffered it not to sprout into rudeness or coarseness; adapting himself to all the usages of the most refined society, he never ceased to be true to those great teachings of nature which ever have more force in proportion as the soul has more greatness. How different from some of our young, *respectable*, and (par excellence) *genteel* surgeons, who, hoping to step one day into his shoes, cannot forbear to show, even to their unfortunate patients, their dignified contempt of every one, and everything that is vulgar, or to use their own terms—snobbish. To such men the life of Cooper offers much the same reproach as Walter Scott’s words to his daughter—“While you consider anything as vulgar that is common, I have learned to feel that nature in her beneficence gave man scarcely anything of good which she did not make common. There is nothing vulgar but vice.”

Though Sir Astley never hazarded the imputation of quackery, he had no fear of essaying the new; and while others condemned by wholesale, he knew how to examine the pompous system in vogue, and to extricate from it the one truth which embodied in each new form of empiricism, keeps it above water for the little hour it is usually doomed to float. His only enthusiasm was for the true and the useful, pursued through the systematic and the just. There was nothing in him of the pretender or charlatan. He was all he gave himself out for; possessed every thing his professional station demanded from him. No man knew his business more thoroughly, and to no man was great natural ability less a pretext for idleness or inattention. A hard student all his life,--

working harder in acquiring surgical information when attending to a practice of 20,000*l.* a year, than the youth grinding for next week’s examinations—his immense labours and the accumulation of knowledge on the minutest as the most important surgical points which grew out of them, extorted from those he left far lagging behind him in the highways and bye-ways of fame the confession that he deserved the distinction he won so hardly; yes! let it ever be said to his praise—*no laurel of the many that covered his brow was UNEARNED*. We have much deerying of professional men now-a-days—and much condemnation of it as spiteful and unkind: yet, who shall say how much of the world’s disparagements rest on the clap-trap nature of the reputations they refer to? If men’s reputations are decried—and sometimes *survived*—the fault is not that of the profession. We may apply a hard test, but *that* which sustains it not for a man’s lifetime, has nothing in it soundly great or good.

To paint in words Sir Astley Cooper as he stood in the full vigour of manhood, in the amiable glow of conscious genius—in the full feeling of deserved and universally admired success—one should be endowed, as a writer, with the powers enjoyed by Sir Thomas Lawrence, as a painter, and be prompted to use them in a moment, not only of eased heart and happy mind, and abundant leisure, but of heaven-sent inspiration. Who shall describe that noble figure, where the proportions of a Grecian statue have—what Grecian statues rarely have—a world of mind and goodness breaking out of them! Mark that style of face, harmony of parts—a beautiful whole—the eyes large and illuminated, the chin moulded as though nature had made herself its special artist—the nose possessing its highest excellence, faultlessness; the mouth chiselled into the most inimitable curves in which beauty and dignity seem reveling in wedded bliss; a brow which might hold the brain of Pagan Jove; features perfect each and each moulding into and harmonizing with one another with the perfection of the varied music notes of a Handel or a Mozart—genius and good-nature struggling which shall give the *spiritual* super-posed character of the whole;—such is Astley Cooper, as memory presents him to us, as seen standing in the hey-day of manhood among the hundreds of admiring pupils, whom it was his pride and pleasure to instruct, to encourage, to direct. No man in personal appearance, to our mind, so nearly resembled Canning, and no man—his studies and pursuits considered—so much resembled him in character and genius.

And this, kind reader, is all that now-a-days we may dare in consulting man’s taste for the new, and ready oblivion of the old, say of Astley Cooper, the good, the amiable, the great—of him who filled Europe with his fame, and on whose fertile brain and ready arm rested the anxious hope and only stay of nobles and monarchs when threatened with the great bankruptcy, in which DEATH, the universal assignee, eternally sequesters whatever of rank, or wealth, or title, or life, the proudest boast of, and un pitying hurls them down the dark and irretrievable gulph of Oreus. Alas! who that knew how much for years he occupied of men’s minds, how large a place for years he filled in science, household, can think of him as gone, and gone too, e’er many of those to whom he lent his aid! So long, so constant in the temple, (so large a part of which he reared, at least sustained,) he moulded in our minds as though a portion of the temple’s self—and thought spontaneous and unquestioned, presented him as much a part as the building, roof, or corner-stone: and yet he’s gone, and the noble temple stands—unsunned by Genius, yet in all

its strength, undazzling afar off as of yore, yet not neglected. He is gone! and the gap, the great one left behind, is filled by many smaller: so goes it ever with men—and men's works. *These* have immortality! oh, shall we deny it to *those*?

NEMO.

EXTRACTS FROM FOREIGN JOURNALS.

(For the 'Medical Times.')

FRENCH.

On the Ioduret of Potassium in the treatment of articular Rheumatism. By Dr. E. Bouyer, of Marennes.—Two years ago, M. Bouyer published a case in the *Gaz. Med. of Paris*, exemplifying the utility of the ioduret of potassium in the treatment of chronic articular rheumatism, accompanied with nodes on the cranium, which had resisted other modes of treatment, and especially that with mercury and the preparations of gold. The favourable result of this treatment having, however, been attributed to its syphilitic origin, M. B. now brings forward several cases of a strictly rheumatic character as having been cured by this remedial agent. In the first patient, a young man 28 years of age, the knees and wrist were the seat of a violent attack of the disease, brought on by being exposed to cold. Neither general nor local bloodletting appearing to be indicated, although there was some degree of fever, he proceeded at once to administer the ioduret of potassium, keeping the patient in bed, and merely applying dry flannels to the diseased joints, and prescribing hot demulcent drinks and a severe regimen. After 14 days of this treatment, the patient commenced to walk about with a stick, and in six weeks from the invasion of the disease, he was enabled to return to his business. The dose was at first 5 grains of the ioduret in a draught, increased 5 grains every five days, until it reached 20 grains. The medicine was taken for 22 or 23 days. In this instance the disease was perfectly free from all venereal complication, the patient never having been affected with syphilis or gonorrhoea, nor had his parents, to his knowledge, ever laboured under the disease. In a second case, a lady 40 years of age, whose husband declared that he had never had the slightest venereal affection, a severe attack of rheumatism, of several years' duration, affecting the wrist, the knees, and the ankles, and accompanied with inflammation of the periosteum covering the left tibia, was cured in from 20 to 25 days by the ioduret of potassium, after the failure of all previous remedies. The periostitis disappeared and the patient is now enabled to walk about. M. Bouyer then gives two or three more cases of a similar character which were cured by the same means, the details of which it is unnecessary to enter into. In one case, however, where there was great tumefaction of the knee, with a sensation of fluctuation, he prescribed the following ointment, in addition to the internal administration of the draught:—Ioduret of potassium, 4 scruples; lard, 10 drachms; iodine, 5 grains. Mix. M. B. then proceeds to state that he has in several instances tried the ioduret of potassium in muscular rheumatism and in sciatica; but he has not found it more efficacious than other medicines recommended in these obstinate complaints. It is then only in chronic and acute articular rheumatism as well as in periostitis that its good effects are so manifest, more especially in the chronic state, insomuch that he declares the ioduret to be as powerful in the cure of these affections as mercury in syphilis or quinine in intermittent fever. M. B. then proceeds to consider the action of the medicine

and acknowledges that the administration of iodine is not wholly exempt from danger, and that one of its greatest inconveniences is that of sometimes inducing atrophy of the mammary glands in the female and of the testicles in the male. But this he regards as resulting from an abuse of the medicine, or from a due want of caution in its administration. The association of opium with the preparations of iodine remarkably modifies the action of this substance and its power of inducing the atrophy of certain glands, as well as its occasionally bad effects on the gastric mucous membrane. He therefore usually prescribes a small quantity of laudanum in the draught in combination with the ioduret to act as a corrective; with regard to the dose of the medicine, he commences at first with 5 grains a day, gradually increasing the quantity to 2 or 3 scruples. Among the authorities on this subject he cites Dr. Clendinning in England, (who strongly recommends this medicine in articular rheumatism and syphilitic periostitis, in doses of 5, 10, 15, and 20 grains a day, gradually increased), and Dr. Buchanan, who states that he has given the hydriodate of potash in the extraordinary doses of 2 drachms and even half an ounce with perfect impunity, merely taking the precaution of administering diluent drinks to the patient in large quantities. Dr. Dietrich, of Munich, relates that, in the treatment of syphilis, he has carried the dose of the medicine up to 2 drachms a day, and speaks as follows of the effect of the medicine in one case. "During the whole treatment no bad symptom arose until the hydriodate was increased to 2 drachms a day, when the patient experienced a slight inflammation of the conjunctiva and nasal mucous membrane." M. Bouyer also found this effect induced in one case. This would of course be a contra-indication to the employment of the remedy, but he considers it as an exception to the general rule of *tolerance* of the medicine. He then states that from analytical experiments it has been proved that the cod's liver oil, which has been so strongly recommended in the treatment of scrofula, especially when affecting the bones or joints, owes its efficacy entirely to the presence of iodine, which has been obtained from this fluid in the form of *ioduret of potassium*; and he finally terminates with the following conclusions:—1. Ioduret of potassium is a remedy of proved efficacy in the treatment of chronic articular rheumatism and periostitis; sometimes even in acute articular rheumatism, especially when it has been preceded by an antiphlogistic treatment which has been but partially curative. 2. This medicine succeeds equally in cases where there is no syphilitic complication and where this complication really exists, when even the ordinary anti-syphilitic remedies have failed. 3. The dose of the ioduret of potassium may be carried, from the commencement of the treatment, from 5 and even 10 grains a day, till gradually increased to 1 or 2 drachms or more, associating with it a small quantity of opium, to prevent its bad effects on the glandular organs. 4. The only morbid phenomenon hitherto observed, and that very rarely, which could be attributed to the administration of the ioduret of potassium in the above doses, is an inflammation of the naso-palpebral mucous membrane, and even this fact requires to be confirmed by more extended observation. 5. Lastly, the ioduret of potassium, being employed with advantage in those cases in which the cod's and skate's liver oils have been recommended, must be far preferable to them from its more easy administration and less disgusting taste to the patient, as also from its more active and more certain effect.

NEW REGULATIONS FOR NAVY SURGEONS.

(Abridged from Sir W. Burnett's recent Circular.)

July 1st, 1842.

THE Lords Commissioners of the Admiralty having directed "that no person be admitted as an Assistant-Surgeon in the Royal Navy, who shall not produce a certificate from one of the Royal Colleges of Surgeons of London, Edinburgh, or Dublin, of his fitness for that office; nor, as a Surgeon, unless he shall produce a diploma, or certificate, from one of the said Royal Colleges, founded on an examination to be passed subsequently to his appointment of Assistant-Surgeon, as to the candidate's fitness for the situation of Surgeon in the Navy; and in every case the candidate producing such certificate, or diploma, shall also undergo a further examination before the Inspector-General of Naval Hospitals and Fleets, touching his qualifications in all the necessary branches and points of medicine and surgery for each of the steps in the Naval Medical Service." The Inspector-General signifies that these directions will be strictly adhered to; and that previous to admission to the Navy, Assistant-Surgeons must produce proof of a preliminary classical education, and in particular a competent knowledge of Latin; of good moral character, the certificate of which must be signed by the clergyman of the parish, or by a magistrate of the district; of an apprenticeship or employment for not less than six months in practical pharmacy; of being not less than 20 years nor more than 24 years of age, and unmarried; of having actually attended an hospital in London, Edinburgh, Dublin, Glasgow, or Aberdeen, for two years subsequently to the age of 18, in which the average number of patients is not less than 150; of having been engaged in actual dissections twelve months; the certificate of which from the teacher must state the number of subjects or parts dissected by the candidate.

That they have attended lectures, &c., at established schools of eminence, by physicians or surgeons of the recognised Colleges of Physicians and Surgeons in the United Kingdom, for periods not less than hereunder stated; (such lectures will not be admitted if the teacher shall lecture on more than one branch of science, or if the lectures on anatomy, surgery, and medicine, be not attended during three distinct winter sessions of six months each), on—

Anatomy, (or General Anatomy 12 months, and Comparative Anatomy 6 months,) 18 months.

Surgery, (or General Surgery 12 months, and Military Surgery 6 months,) 18 months.

Theory of Medicine, (if the Lectures on the Theory and Practice of Medicine are given in conjunction, then the period required is 18 months,) 6 months.

Practice of ditto, (ditto,) 12 months.

Clinical Lectures, (or the Practice of Medicine,) 6 months.

Ditto at an hospital as above, (or the Practice of Surgery,) 6 months.

Chemistry, (or Lectures on Chemistry 3 months, and Practical Chemistry 3 months,) 6 months.

Materia Medica, 6 months.

Midwifery, (accompanied by certificates stating the number of Midwifery cases personally attended,) 6 months.

Botany, (or General Botany 3 months, and Medical Botany 3 months,) 6 months.

Six months lectures on Pathology, if given at a university where there may be a Professorship on that branch of science, will be admitted in lieu of 6 months lectures on the Practice of Medicine.

In addition to the tickets for the lectures, certificates must be produced from the Professors, &c., by whom the lectures were given, stating

the periods (in months) actually attended by the candidates. The time also of actual attendance, at an hospital or infirmary must be certified; and the tickets as well as certificates of attendance, age, moral character, &c., must be produced by the candidate immediately on his being desired to appear for examination.

Although the above are the only qualifications which are absolutely required in candidates for the appointment of Assistant-Surgeon, a favourable consideration will be given to the cases of those who have obtained the degree of M.D. at either of the Universities of Oxford, Cambridge, Edinburgh, Dublin, Glasgow, or London; or who by possessing a knowledge of diseases of the eye, and of any branch of science connected with the profession, such as Medical Jurisprudence, Natural History, Natural Philosophy, &c., appear to be more peculiarly eligible for admission into the service, observing, however, that lectures on these or any other subjects cannot be admitted as compensating for any deficiency in those required by the regulations.

By the rules of the service, no Assistant-Surgeon can be promoted to the rank of surgeon until he shall have served three years in the former capacity, one year of which must be in a ship actually employed at sea; and it is resolved that not any diploma or certificate of examination from either of the aforesaid Royal Colleges, shall be admitted toward the qualification for surgeon unless the diploma or certificate shall be obtained on an examination passed after a period of not less than three years actual service, observing that no one can be admitted to an examination for surgeon unless he be a member of one of the above-named Royal Colleges; and whenever Assistant-Surgeons already in the service (whose professional education may not be in accordance with the above) obtain leave to study previously to their passing for surgeon, they will be required on their examination to produce testimonials of their having availed themselves of the period of leave to complete their education agreeably to these regulations.

Candidates who may be admitted into the Naval Medical Service, must serve in whatever ships, &c., they may be appointed to; in the event of their being unable to do so from seasickness, their names cannot be continued on the Naval medical list, nor can they, of course, be allowed half-pay.

ON THE PROCEEDING TO BE ADOPTED IN A CASE OF INJURED INTESTINE, FROM A BLOW UPON A HERNIAL SAC.

By C. ASTON KEY.

MR. KEY'S attention has been directed to the treatment of these severe injuries by three fatal and two successful cases.

The accident usually occurs, either by a direct blow upon the lower part of the abdomen, or by the person being forced against some unyielding body, by which the truss is pushed aside, and at the same instant the intestine, descending into the sac, receives the full force of the collision. When the hernia is not supported by a truss, its descent takes place, and the blow is directly received upon the intestine. Sometimes the patient is unconscious of the existence of the hernia; and the symptoms that accrue, may be erroneously referred to an injury within the abdomen, or to the testicles and cord.

The injury to the intestines will vary according to the violence of the blow. The contusion may be insufficient to burst the bowel, or to occasion such a lesion of tissue as shall and in gangrene, its effects being only inflam-

mation of the coats of the intestine; or the violence may be such as at once to rupture the intestine; or, failing to rupture the bowel, the contusion may be so severe as to be followed by sloughing and escape of fæces.

1. The mildest form of injury which a blow inflicts on a hernia is analogous to the contusion of other soft parts. The smaller vessels of the mucous and other tissues being ruptured, pour their contents into the reticular membrane, and thus gorge it with extravasated fluids. Such contusions, it is probable, are not followed by any serious consequences; nor will there be any material symptom beyond a certain degree of inaction in the muscular coat of the bowel, giving rise to temporary constipation.

"The two first indications that immediately force themselves on the surgeon's attention, are, the necessity of returning the contents of the hernial sac, and obtaining free evacuations from the bowels. To the former of these proceedings there can be no objection, as the vitality of the bowel is scarcely endangered; and if it were left in the sac, adhesion might form between the injured bowel and peritoneum, that would afterwards interfere with its return into the abdomen. The administration of purgatives ought to be wholly abstained from notwithstanding the confined state of bowels usually consequent upon an accident of this nature. A bruised bowel is placed by nature in a state of rest; the exhaustion of the nervous energy of the part diminishes in the muscular tissue the disposition to contract. Such inactivity of the bowel should be encouraged, and not thwarted by irritating purgatives. The safety of the bowel depends on the non-occurrence of inflammation; but if by undue interference, the bruised structure is hurried into a state of inflammation, sloughing or ulceration will probably be the result. Beyond an occasional enema, to unload the larger intestines, nothing need be done. Opium may be required, if pain come on, indicating peritonitis; and if joined with ealomet, care should be taken that the action of the former should preponderate, in order to prevent the probability of stimulating the bowel. Food should also be given in the smallest quantity, and in a fluid form, that little or no feculent residue may remain to oppress the part. In this respect, nature is our guide: vomiting, which usually ensues immediately after the accident, empties the upper part of the canal; and the little desire that the patient feels for food, prevents, if nature be allowed her own way, any chance of repletion. Thus the part is placed in a state of repose; and the circulation soon regaining its healthy condition, the functions of the intestine are restored."

Mr. Key adverts to the question of administering purgatives after the operation for hernia. He is decidedly opposed to the practice. We must confess that we are inclined to agree with him.

2. If the contusion, continues Mr. Key, be so severe as to destroy the vitality of the bowel without rupturing it, the condition of the patient, both immediately after the accident and for several days subsequently, sufficiently attests the severity of the lesion which the part has sustained. The hernial sac is usually found filled with the injured bowel; but the absence of distention serves to distinguish it from a state of strangulation. The integuments appear to be bruised, though sometimes but slightly. The part is very tender when handled, but feels soft and pliant; and very moderate pressure is sufficient to reduce the contents of the sac.

The shock which the nervous system receives, is followed by a feebleness of the circulation, a corresponding pallor of the whole surface, and a

sense of syncope. This condition is however only transient; re-action almost immediately ensues, the patient passing from the state of collapse, and gradually rising into a state of inflammatory excitement, as the injured bowel becomes the seat of more or less inflammation.

The speedy recovery of the patient from a state of collapse quickly dissipates the suspicion of a rupture of the intestine; and the surgeon usually endeavours to replace the contents of the hernial sac as soon as re-action takes place. To this proceeding there is no objection. If it be done with gentleness, the danger of abdominal extravasation will not be increased by replacing the injured bowel at the neck of the sac; for should sloughing of its coats ensue, the slough may be walled in by adhesion of the surrounding peritoneum, and fecal extravasation be prevented; or should this salutary process of adhesion fail to insulate the slough, the sac will receive the fecal matter and quickly give intelligence of the impending mischief, by the tumefaction that will ensue within the scrotum.

The symptoms that arise in this state of things, in some points, resemble those of a strangulated bowel. The rejection of food from the stomach, the difficulty of obtaining stools, the tense and tender belly, and the swollen state of the scrotum, all lead to the impression that a portion of intestine has passed down through the rings, and has become incarcerated.

Mr. Key relates a case which seems to be in point. He also details the particulars of three others, and concludes:—

It does not appear that persons are always aware of being the subjects of hernial protrusion: some, from carelessness, failing to notice the existence of a rupture; and others, from design, concealing their knowledge of the circumstance, when closely questioned as to enlargement at the rings. In two of the cases related, the patients did not seem to have been aware of any hernial swelling before receiving the blow. The history therefore of these cases, given by the patients, cannot be wholly relied upon. Their ignorance of the fact is not to be taken as evidence of a rupture not having existed previously to the blow; and it is of no little importance to establish the existence of a hernia; as without it, a rupture of the bowel is in the highest degree improbable, by a blow received upon the pelvis, or scrotum, or even upon the inguinal canal. Careful examination of the abdominal rings, and of the canal, can alone decide the absence or the presence of hernia, and establish the probability, or otherwise, of the bowel being ruptured, so far as the existence of a hernia may favour it.

It may be urged, that the symptoms following upon a bruised intestine, or even upon a contusion of the testicle, may closely simulate those of a ruptured bowel. After these injuries, pains of a severe kind are felt about the scrotum and groin; the parts cannot endure rough handling, and vomiting sometimes follows. But these symptoms are transient; the shock passes away, and re-action ensues. The peculiar distress of countenance characteristic of ruptured bowel is wanting in the less severe injuries of these parts; and it is only the continued, and increasing urgency of symptoms that fail to be relieved by the mild means resorted to, that should induce a surgeon to take the more serious view of the injury.

The period and manner in which the signs of lesion to the bowel show themselves will serve sufficiently to point out to the surgeon the course which he is to adopt. The unnecessary exposure of a hernial sac and its contents is as much to be avoided, as delay is to be deprecated when extravasation of feculent matter is taking place. The former, however, is far the lesser

evil; as experience shows that, in cases erroneously supposed to be strangulated hernia, the operation of opening the sac has been productive of no mischief. It is not likely that a surgeon, with ordinary discretion and knowledge, will be liable to mistake a mere external contusion, be it ever so severe, for a burst or injured bowel; nor will he be under any embarrassment how to proceed under the varieties of lesion to which the bowel is subject. The interval of ease that sometimes follows the blow, will not be taken as evidence of the bowel having received no lesion; for it seems that until the peritoneum suffers from the presence of irritating matter, liquid or gaseous, upon its surface, the constitution does not take alarm. In the most severe injuries, when the rent in the bowel is extensive, and the fecal effusion almost instantaneous, the symptoms at once assume a character too marked to be mistaken; and the only mode of affording relief, namely, that of at once opening the hernial sac, is obviously pointed out. When the opening is so small as to prevent, for a time, any escape of the contents of the intestine, there is no necessity for any decisive step being taken, until called for by the unequivocal collapse and pain that attends extravasation. The interval of ease, as in the case of Jones, may lull for a time all suspicion as to the occurrence of rupture; but when extravasation begins, and not before, the surgeon's interference is called for; and no time should then be lost in affording an outlet to the offending fluids.—*Medico-Chirurg. Review.*

MEDICAL MEMS. OF THE WEEK.

By PERISCOPICUS.

NATURE OF TUBERCLE.—I now inquire, says Sir C. Scudamore, into the nature of tubercle, as revealed to us by means of chemical experiments, of the microscope, and the labours of the dissecting-room. I have made very numerous chemical examinations of tubercle, and have found that all the varieties present one general result, of showing them to be composed always of albumen, occasionally with slight evidence of fibrine, always of lime in abundant proportion, and in varying degrees of combination with carbonic and phosphoric acids, more rarely with muriatic; and in some specimens I have detected the slight presence of magnesia. The more hard the tubercle, the larger proportion of phosphate of lime does it contain; and when of less firmness the proportion is greater of the carbonate; and more especially in relation to this point, the albumen is more dense. I have not discovered any gelatine in tubercle. In proportion as it may possess transparency, the albumen which it contains is thinner, and of the least specific gravity; and on the contrary, when opaque, it is more dense, possessing more of the albuminous principle and less water. Hence, then, the external characters of tubercle depend on its chemical composition, and on the particular tissue in which it is formed. I examined a pearly-looking tubercle, commonly called the crude-yellow one, found under the peritoneal covering of the liver, about the size of half an almond, and of moderate firmness. It consisted of albumen, carbonate of lime, and a small proportion of phosphate. On the surface and throughout the substance of the liver and spleen there were harder tubercles, varying from the size of hempseed to that of a pea; and there were also small tubercles on the diaphragm and peritoneum. Not one was found in the lungs, but at the apex of the right lung there was a small cavity, capable of holding a pea, from which evidently a tubercle had been removed after softening. There were pleuritic adhesions on both sides. The lower lobe of the right lung was much congested, and its struc-

ture somewhat softened. In the history of this case (at the Marylebone Infirmary) it is stated that the patient, aged sixty-four, "had little or no symptom of pulmonary disease, and appeared to sink from debility." I have met with many examples of calculous concretion, varying in size from a kidney-bean to that of a hempseed, in tuberculated lungs, and chiefly when the tubercles have been of the grey granular kind, opaque, and of the appearance of very fine shreds matted together. I have occasionally found the calculus firmly encysted, without having produced any signs of irritation in the surrounding tissue. Sometimes the phosphate of lime has predominated in the calculus, at others the carbonate. I attend a lady who has during the last seven years expectorated from time to time, and never been free for more than six months, small pieces of calculus, which I found to consist wholly of carbonate of lime and animal matter. A few days before she gets rid of them she has a troublesome cough, with quicker respiration than usual, and pricking sensations at the pit of the stomach. I know another lady who has occasionally coughed up calculi during the last thirty years. I was satisfied that in neither of these instances did the calculi come from the tonsils. It would appear, therefore, that calculi are occasionally formed in the lungs without the accompaniment of tubercles, and without producing serious irritation in the lung.

EXCISION OF THE ELBOW-JOINT.—M. Robert practised this operation on a woman, aged 26 years. The disease was caries of the humero-cubital articulation, following a fall on the elbow. There were several fistulous openings about the olecranon. In the fold of the arm were two deep sinuses penetrating into the joint. The soft parts around were moderately engorged. The operation was effected by dividing and reflecting the integuments over the olecranon. The humerus was sawn through immediately above the condyles, the ulna below the coronary process, and the radius just below its articular extremity. The limb was placed in the apparatus of M. Guizot. But little reaction ensued, and the fever and sleeplessness which had previously harassed the patient ceased immediately. Nevertheless, the suppuration continued a long time, it being impossible to approximate the divided ends of the bones, and the wound was not completely cicatrized for eighteen months. Two years and three months after the operation, the limb had regained the same size as that of the opposite side. When it was in repose, and hanging by the side of the thorax, there was perceived between the extremity of the humerus and the bones of the forearm a separation of nearly three fingers, breadth, occupied by a dense, but very flexible tissue, which allowed the fore-arm to move freely in all directions. The limb in this position looked as if impotent or paralysed. But when the patient attempted to bend the forearm, the space comprised between the bones of the arm and forearm was effaced by the ascent of the latter, which mounted to obtain a fulcrum from the lower surface of the humerus, and the bendment of flexion was then effected, being carried to such an extent that the forearm formed a right angle with the arm. The patient could easily carry the hand to the head or to the opposite shoulder, and could raise tolerably heavy weights, as a chair. The power of pronating the hand existed in a moderate degree. The movements of the fingers were perfectly free. She could grasp, with tolerable force, bodies placed in her hand, and could hold objects of very small size. For several months she had resumed her occupation as a sempstress; she is accustomed to use her needle with the left hand, holding and

fixing the work with the right. To avoid the fatigue which would result from long-continued flexion of the forearm, she wears, while at work, a small apparatus composed of two pieces of leather, one embracing the upper, the other the forearm, which are joined at the fold of the limb.

THE SPLEEN.—M. Bourguery considers the spleen to consist of ten component parts:—1. Vesicular membranes; 2. blood-vessels; 3. floating vascular corpuscles; 4. a granulo-capillary ground; 5. a splenic liquid; 6. splenic glands; 7. lymphatic vessels; 8. nerves; 9. cellular tissue; 10. the enveloping membrane of the spleen. The splenic vesicles are uniformly spread over the whole extent of the organ, are of an irregular polyhedral, and when fully injected of a spheroidal or oval shape, varying in size in different animals, and also in the same spleen. In man their mean diameter is from 1 to 1½ millimetre. Each vesicle does not form a simple cavity, its walls being traversed by vessels, which form projections in the interior, covered by the lining membrane. In consequence of this arrangement the cavity is divided into cells, at the bottom of which the minute glands and capillary vessels are seen in relief. There are orifices in vesicles of two sorts:—1. Orifices of communication more or less irregularly circular, whose edges are thin, and formed by a fold of the membrane which lines the cavity. Their diameter is from a quarter to half of that of the vesicle. There are one, two, or three orifices in each vesicle; and to this reciprocal communication is due the ready inflation of the organ, not only from the veins, but also from an aperture on any part of its surface. 2. The venous orifices, less numerous than the communicating, and scattered here and there, a single vesicle sometimes containing two or three, at others one cannot be found in a group of several vesicles. They are of a circular or elliptical shape, one-twelfth of a millimeter in diameter, and are the absorbing mouths of veins. Between the vesicles are septa, or intervesicular spaces, formed by the separation of their lining membrane, and containing the splenic glands and vessels, their size varying with the greater or less repletion of the organ, but generally bearing the relation of 2 to 3 to the vesicular part. The investing membrane, forming the walls of the cells, is continuous through the whole extent of the spleen, and may be considered as one homogeneous whole, divided into numerous little ampullæ. It is supported by vessels and glands, and forms a sort of frame-work to the organ. This membrane is very complicated in its structure, and cannot therefore be considered, as by Malpighi, to be a simple dilatation of the internal tunic of the veins. The splenic arteries and veins, running side by side, are directed towards the periphery of the spleen, the veins being pierced in their whole extent by little circular apertures, leading into the smaller intervesicular branches, which are distributed to the splenic glands and the membranes of the vesicles. The small vessels project into the cavities of the vesicles in a peculiar manner to reach the floating corpuscles, and present the appearance of a bunch of grapes. Lastly, all the small vessels of the spleen, in the turgid state, present numerous dilatations and contractions, so as to give them a marked knotted appearance. The corpuscles are small bodies floating in the cavities of the vesicles, to the walls of which they are attached in a pediculated manner, by the extreme branches of the blood-vessels and lymphatics. They are about fourteen or fifteen times the size of the blood-globules. By the granulo-capillary basis is intended to be represented the two structures placed beneath the vesicular membrane, viz., spherical pale granules or glands, four or five

times the diameter of the blood-globules, and the capillary net-work, of veins, arteries, and lymphatics. The splenic liquid, which appears to be elaborated by the floating corpuscles and the granulo-capillary basis, is deposited in the cavities of the vesicles, and taken up by the absorbing veins or their walls. It is thick, viscous, of a reddish-brown colour, and under the microscope appears to consist of globules suspended in a yellowish unctuous fluid. 1. Lenticular globules, some of which are surrounded with a red border, and appear to differ very little from ordinary blood-globules; others being colourless. 2. Whitish globules, irregular in form and size, and resembling those found in the chyle and lymph. The splenic glands, as far as actual volume and consistence are concerned, form the principal organic element of the spleen. They fill with the ramifications of the vessels, the intervesicular spaces. Their diameter is a quarter of a millimeter. They are united by bands of a similar nature with themselves, which extend over every part of the spleen. From the afferent and efferent lymphatic trunks, and the dispositions of the vessels about them, M. Bourguery is convinced that they are simply minute lymphatic glands. The lymphatic vessels are extremely numerous in the spleen, and in many situations remarkable in their structure being enlarged at intervals, and, in addition to their valves, divided in their interior by septa which gives them a sort of rudimentary glandular structure, and shows them to be not merely canals for transport, but also, in some degree, organs of elaboration. M. Bourguery considers the spleen as an apparatus for the elaboration of the blood, and draws an analogy between it and the lymphatic glands; observing that if, in relation to its anatomical structure, we may define the spleen as a vast lymphatico-sanguineous gland, on the other hand lymphatic glands generally may be considered, to a certain extent, as small spleens appended to different parts of the circulatory apparatus. In treating of the intimate structure of these glands, we shall see how far the idea of the conformity of these two sorts of organs, evident so far as the glandular structure of the spleen is concerned, is borne out by the internal organization of the canals of the lymphatic glands.

ABSENCE OF EXTERNAL GENITALS.—In April, 1838, Dr. Magee, of New York, was requested to visit Miss —, then about eighteen years of age. He found her suffering from severe pain, which intermitted, and returned in aggravated and excruciating paroxysms, similar to those of parturition. He was informed that the pains had first made their appearance about twelve months before, and were then slight and transitory, similar to those anomalous ones of which young females usually complain about the period of puberty; that they were not permanent, but returned about every four weeks, increasing in duration and intensity; that the last two or three attacks had continued each time for more than a week, and were so severe that the patient could find no relief, except from large and frequently repeated doses of opium. On visiting the patient he found that the organs of generation were wanting, but that her breasts were fully developed. The mons veneris, and that part of the ossa innominata called the ossa pubis, were entirely wanting, and their place supplied by a semi-cartilaginous membrane similar in appearance to a cicatrix from a large and deep burn or ulcer. The labia were also absent, as well as the clitoris and nymphæ; neither were there any signs of a vaginal or urethral opening. The whole space from above where the pubis is usually found to the anus was one even surface, except some corrugations of the integument. The urine escaped by a constant oozing from an uneven, spongy, and

vascular excrescence, placed in the situation of the umbilicus, about as large and similar in colour to a ripe middle-sized tomato, but rough and palpulous on the surface. During a paroxysm of the pain, he thought he could perceive a slight elevation of the integument over that part which should be the situation of the vagina. He supposed, therefore, that as the breasts were well developed, notwithstanding the external generative apparatus was wanting, the internal and most important might exist, and that the pains arose from the expulsive efforts of the uterus to free itself from the accumulating menstrual fluid. He administered a full dose of morphine, and remained until its operation had quieted the pains. He then prescribed a mild purgative, and ordered a second dose of morphine to be given after the operation of the aperient. The next day he returned with Dr. Donation Binsse. The patient had passed a good night; the medicine had operated freely, but the pains were returning. After examining the parts with great care, D. B. agreed with him that it would be advisable to make an incision to permit the escape of the fluid, which was supposed to have accumulated. The patient being placed in a convenient position, he commenced dissecting cautiously with a scalpel through that part which seemed to be elevated the day previous. He continued this dissection with great care, for he was fearful, from the abnormal condition of the parts, that he should meet with some unusual disposition of other important organs. After dissecting down about half-an-inch, or perhaps more, a dark substance began to ooze from the wound, of the consistence of tar, and in colour a shade darker than Spanish-brown paint, but without any offensive odour. He then introduced a probe pointed bistoury, with which he enlarged the opening both upwards and downwards. Through this from two to three pints of the fluid above described escaped in a short time, followed by almost immediate relief. On visiting her next day, he learned that the discharge had nearly ceased, and the patient was very comfortable. The opening was kept pervious by a roll of linen saturated with melted bees-wax, and secured with a T bandage. He has seen her frequently since, and learns that the catamenial discharge is regular, and the opening permanent. She has well-formed pleasing features, and a full figure, somewhat inclining to embonpoint.

ERECTILE TUMOUR OF THE ORBIT.—M., æt. 60, came to Paris to consult the leading medical men, respecting a pulsating tumour, which, from being scarcely visible, increased in a few months to the size of an egg, and mounted up from the orbit to the frontal bone. Insupportable pain attended every movement of the eye, while vision on that side was destroyed. All remedies having proved ineffectual, it was determined to tie the right common carotid artery. Immediately after the application of the ligature, all pain and pulsation ceased. The wound healed by the first intention, but the ligature, detained by the cicatrix, did not come away for a month. The eye which had projected now returned within the orbit, and its various movements were performed without pain or limit. Little or no pulsation was perceptible in the arteries of the face on the right side, but on the left side they were abnormally developed, while the healthy eye was unusually brilliant. In this case, and in another which occurred to M. Jobert, no cerebral symptoms supervened upon the ligature of the common carotid; but finding a great discrepancy of opinion in the works of various writers upon this point, he instituted several experiments upon animals. The result of these was, that the tying the carotids was followed not by the production of cerebral mischief, but by the indication of a true pulmonary apo-

plexy; and moreover, that this operation might be performed with impunity upon the dog, sheep, rabbit, and calf, but was fatal to the horse. In this animal, the vertebral arteries, large on entering their osseous canal, become almost filiform before penetrating the cavity of the cranium; and thus, after the ligature of the carotid, the blood not passing to the neck, head, and brain sufficiently freely, large apoplectic congestions of the lungs are formed. Bleeding, prior to and subsequent to the operation, was found to diminish the gravity of its effect, and M. Jobert suggests that in strong men depletion should be resorted to, to prevent any pulmonic stasis.

SPONTANEOUS COMBUSTION.—Hannah Bradshaw, aged 30, was a healthy hearty looking woman, remarkably industrious, and neat in her person and manner of living, but bore a bad character with respect to chastity and sobriety. On the evening of the 31st of December, 1770, she desired a young woman who worked for her, and was going home, to come again early the next morning, and about seven o'clock the same evening another acquaintance parted from her, at which time she seemed to have drunk a little too freely. She was neither heard of nor seen again until the next morning, when the young woman returned to her work; after knocking and calling, and having waited until past eleven o'clock, this person, by the aid of a man who lived below, got in through a back window, and opened the door. On looking within a screen which went quite across the room, and was fitted to reach the ceiling, she discovered the mutilated remains of Hannah. The body, or rather the bones, were lying near the middle of the floor, wherein a hole of about four feet in diameter was burnt quite away, and the bones were on the ground about a foot beneath that part of the floor. The flesh was entirely burnt off the bones of the whole body, except a small part on the skull, a little on one of the shoulders, the lower part of the right leg and foot, which was burnt off at the small, almost as even as if cut off, and left lying on the floor. The stocking was burnt off as far as the leg, and no farther. The bones, some of which were black, and others white, were so thoroughly burnt as to crumble to dust between the fingers. The bowels remained unconsumed. One of the sleepers, which lay under the shoulders, was almost burnt through; part of the head lay on the planks at the edge of the hole; and near it was a candlestick, with part of the candle in it, thrown down, but it did not appear to have touched any part of the body, or to have set anything on fire. The tallow was melted off the wick, which remained unscorched by the fire, as also the screen, which almost touched the hole. The leg of a rush-bottomed chair, and about half the bottom, were burnt so far as they were within the compass of the hole on the floor, and no further. The ceiling of the room, which was white-washed plaster, was as black as if covered with lampblack, as also part of the walls and windows; the heat had been so great as to extract the turpentine from the boards and the wainscot. After all these operations, the fire went entirely out, so that when the body was found, not a spark remained. The American Journal of the Medical Sciences, states this to be the first American case recorded.

ERGOT OF RYE IN PARAPLEGIA.—M. Payan reflecting that the ergot of rye acts on the rectum, the bladder, and lower extremities, as well as on the uterine system, thinks that its special action is on the spinal cord, and thinks that we may employ it wisely in paraplegia, and cases of weakness of the lower extremities, depending on defective action of the spinal cord, without alteration in its structure. M. Payan adds the following fact in proof of the justice of his observation: A man, 40 years

old, fell on his perineum, and paraplegia followed. He recovered entirely under treatment at Marseilles; and subsequently meeting with a similar accident at Aix, was admitted into the hospital of that place. In the absence of M. Payan various remedies were employed to remove the paraplegia, as liniments, blisters, &c., but without success. On the return of M. Payan, these measures were substituted by the ergot of rye, given to the extent of a drachm. Two hours afterwards the muscles began to agitate the limb, and he recovered a certain degree of power every day. At the end of six days the patient could walk with the assistance of a stick. During a fortnight the ergot was administered in two-drachm doses; the treatment was then suspended on account of some gastric irritation, but the amelioration continued, and in a month the patient left the hospital.—From this and other cases M. Payan infers not only the efficacy, but also the entire innocence of this remedy, which he has in many instances employed in large and long-continued doses without any ill effect.

MILLIPEDES IN THE HUMAN STOMACH.—A boy, fifteen years of age, the son of a labourer named Griffiths, living in the village of Bucknill, near Knighton, had for some months complained of pain in his stomach, which did not yield to common remedies. On the 9th of June his mother gave him an emetic of antimonic wine, after which he vomited a considerable number of millipedes (wood-lice), an insect of the genus scolopendra. They were mostly alive and full grown, but wanting the brown colour of those found in natural situations. These were white. Dr. Davis, Presteign, apprized of the circumstance, proceeded to the place, and was fortunate enough to secure some of the insects. He had the testimony of the mother and neighbours that they would have half filled a common sized teacup. There can be little doubt that the ova had been swallowed by the boy with his food: the insect frequently burrows in bacon, which is sometimes eaten raw by hungry children.

TYPHUS.—In the advanced stage of typhus, and where there existed floccitation, delirium, and a concatenation of the most appalling symptoms, with a state of insomnia, Dr. Jackson of Cork has (where due depletion had been previously adopted) exhibited a mixture consisting of tartar emetic, tincture of opium, and camphor mixture, with truly miraculous results.

STRUCTURE OF MILK GLOBULES.—M. Mandl regards the milk globule as composed of two parts; a central one containing the principle of butter, and a small membrane which serves as an envelop. This is a highly important point to decide, for on it depends the doctrine of the vitality of certain fluids. To decide it we must carefully avoid any means by which the natural structure of the milk globules may be altered. The means adopted by M. Mandl consists in pressing the milk between two plates of glass, which are made to glide in opposite directions. When this is done, we see a number of oily globules, and the remains of lacerated membranes, which assume great variety of shape and dimension. This experiment seems to the author a conclusive proof of the fact, that the milk globule is composed of an oily nucleus enclosed in a membrane; but the reporters have confirmed the theory by experiments of their own, and cleared up some doubts which they were, at first, inclined to entertain. Thus, when the milk is pressed between the glass plates, and the globules ruptured, the thickness and length of the membranous shreds seem inconsistent with globules of so minute a diameter as the milk globules are. But on mixing a little water with the milk, and watching the effects of graduated pressure, it was seen

that the pellicles were much finer and more delicate than when undiluted milk was employed, because in the latter case the pellicles stuck to one another. On extending the microscopic researches to the pollen of mercurialis, and other parts of plants which contain globules, it was found that pressure between glass plates sometimes gave rise to the same appearances as were observed in milk.

CROWING RESPIRATION.—The child of a physician, in London, says Dr. Sandwith, of Hull, was under Dr. Hugh Ley's care during a protracted attack of this disorder. The father had previously lost another child from the same complaint. This circumstance, coupled with a thorough persuasion of the truth of Dr. H. Ley's theory, that in the vast majority of cases the par vagum, or its recurrent branches, are in fault, owing to the enlargement and pressure of the bronchial or cervical glands, led him to despair of his child's recovery. In several conversations which, as his friend, I had held with him, he stated his perfect conviction of the fact of glan-lular enlargement, and consequent nervous loss of function in the larynx, as the cause of the paroxysm. It was in vain that I told him I thought there was enough in the disordered digestion of a child reared by the spoon, and probably subjected to the additional irritation of dentition, as well as to the pernicious influence of impure air, to account for the paroxysms; at the same time that I by no means denied the possibility of structural affection of the bronchial and even mesenteric glands. It seemed to me also a clearly chalked out line of practice, in such a case to ascertain the effects of the adoption of the obvious remedies suggested by these facts, namely, a wet-nurse, scarification of the gums, and removal into the country. At all events, I thought this course preferable to remaining in town, and persevering in the use of iodine under such unfavourable circumstances. My friend, however, was not to be moved from his present plans, though no relief, after a long trial, had followed their employment, and though he frankly confessed he anticipated no advantage from continuing them, but wholly despaired of his child's recovery. Being at that time a resident in London, I was one day dining with this gentleman and his lady, when the nursery-bell gave us a sudden and loud alarm. The child, which had become extremely emaciated, had had seven fits that day. The parents rushed up stairs—I followed. On my reaching the nursery, I found the mother on the floor in a swoon, from agony of mind. The father's solicitude was divided between his wife and child, the latter of whom was in the worst paroxysm which had yet been witnessed. It was more severe, continued much longer than usual, and after a few minutes terminated in complete asphyxia. Under these appalling circumstances I set about inflating its lungs, by pressing the larynx down on the œsophagus with one hand, closing its mouth with the other, and applying my lips to its nostrils. After a short time the child's respiratory organs responded to each act of inflation, and by persevering in the process a considerable time, respiration was completely restored. For many hours, however, the child remained feeble, and uttered a plaintive moan, which was connected with each respiratory effort. The mother, overpowered by gratitude, now listened to my suggestions. The child was sent the next morning into the country, a wet-nurse was procured, and convalescence was speedily established. About five years have since elapsed, and my little patient is at this day a fine, sprightly, and healthy child.

INTESTINAL WORMS.—Dr. Bellingham, after examining the intestinal canal of the individuals who died in St. Vincent's Hospital,

during a period of three years, viz., ninety persons, found in eighty-three of them some species of intestinal worm, and in several more than one species; only seven were altogether free; of these seven, three died of scirrhus or cancer; and in two very extensive ulceration of the cœcum and colon (preceded by long-continued diarrhœa) existed.

FOREIGN LIBRARY OF MEDICINE, SURGERY, AND THE COLLATERAL SCIENCES.

[Exclusively compiled for the MEDICAL TIMES from French, Italian, and other Continental Periodicals.]

FLOURENS, Analyse—Analysis of the Works of George Cuvier, preceded by his Historical Eulogium. Paris, 8vo.—**DITTO, Examen**—Treatise on Phrenology. Paris, 8vo.—**Notice**—Notice on the Sulphureous Mineral Waters of Vernet, near Prades, in the Pyrenees. Paris, 8vo.—**GAY LUSSAC, Cours**—Course of Chemistry. Paris, 8vo, 2 vols.—**WEEHRT, Dr. K., Die Entwicklung**—The Development of the Different Races of Men, through the Means of the Exterior World. Leingo, 8vo.—**DUCHESNE, E. A., Repertoire**—Repertory of the Useful and Venomous Plants of the Globe. Paris, 8vo., with woodcuts.—**DITTO, Atlas**—Atlas of the Repertory, containing 128 Plates, and a Table. Paris, 8vo.—**WIBMER, Dr. C. (Body Physician to the King of Greece), Die Wirkungen**—The Effects of Medicines and Poisons on the Healthy Animal Organism. Munie, 5 vols. 8vo.—**MAJOR, Dr. M., Chirurgie**—Popular Surgery, or Advice how to act in Urgent Cases in the Absence of a Surgeon. Leipzig, 8vo.—**MENE MAURICE, Dr., Surdit  **—On Deafness and Migraine. Lyon, 4to.

MEDICAL NEWS.

CORONER'S DELINQUENCIES.—The senior coroner for Dublin, and a friend of his, a surgeon, have been convicted and sentenced to imprisonment; the first for giving a false order for remuneration for medical attendance at an inquest that never was held; the latter for receiving it and getting it cashed. Our Irish brethren seem to have loose notions on public property. A similar case to the present occurred a short time since in Connaught.

M. Athuison, superintending surgeon, gives the following summary (in his history of the first campaign in Afghanistan. Dr. Kennedy is his authority for the Bombay divisions. He says, "I may conclude by stating that the summary of the history of 19 hospitals of the force during the 14 months, from November 1st, 1838, to December 31st, 1839, gives, in the European hospital, cases treated 4648, deaths 273, and in the native hospitals, cases treated 7041, deaths 135; sufficiently indicating the hardships endured when compared with the strength of the division, and also that every branch of the hospital department was efficient. Cases treated in the Bengal European hospitals, 4471; deaths, 161; cases treated in the native hospitals, 12,249; deaths, 288. Dr. Kennedy's numerical statement gives nearly six per cent. of deaths among the Europeans, and two per cent. among the native troops in 14 months; but the Bengal divisions had only three and three-quarters per cent. of deaths among the Europeans, and two and a quarter per cent. among the native troops during the same period. The total number treated in hospital in the Bombay column was less than 12,000, but in the Bengal column nearly 17,000.—*Athuison's Narrative.*

PLAYS IN LUNATIC ASYLUMS.—On the 20th ult. a vaudeville was performed at Bicetre by the patients, followed by a musical concert. The actors and musicians were trained by M. Florimond Rouger, who has devoted his ser-

vices for some time past to the establishment. The play went off admirably, and the most perfect harmony reigned throughout the proceedings.

M. Edwards, Member of the Royal Academy of Moral and Political Sciences, and of the Royal Academy of Medicine, lately died at Versailles. He was the author of several valuable works, among others, a *Treatise on the Influence of Physical Agents upon Life*.

NEW PHRENOLOGICAL ASSOCIATION.—A Correspondent tells us, that among other members, Sir George Mackenzie, Sir William Baine, Dr. Browne, Dr. Andrew Combe, Dr. Forbes, Dr. Moore, with Messrs. Deville, Cull, Hytche, Cox, have seceded from the Phrenological Association, and are about to form another.

ST. LUKE'S HOSPITAL.—At a late meeting of governors of St. Luke's Hospital, a resolution was come to, that pupils should be admitted into the wards for the purpose of studying insanity, the number to be regulated according to the discretion of the physicians.

PHARMACY IN GERMANY.—The practice of medicine being distinct from that of pharmacy, the apothecary is not allowed to visit patients; but his duties consist in selling and preparing drugs, and compounding prescriptions.—Prescriptions of a powerful nature or poisonous quality are not allowed to be repeated without a fresh order from the medical attendant, and all external applications must be labelled *external*, and distinguished by a blue label.—No drastics, emetics, diuretics, or emmenagogues can be retailed except by direction of a medical practitioner; and the apothecary is expected to satisfy himself respecting the legal qualification of the prescriber, and thus becomes responsible for every prescription which is prepared at his shop. It is obvious, says the Pharmaceutical Journal, that such a state of things may suit a country like Germany, where government has a finger in every pie, and almost regulates the hour at which a man may go to the water-closet. But to our Island with its commercial republicanism it is totally inapplicable. Here free trade obtains in quackery at all events, if not in other things, and any man may set up to physic or to poison his neighbours, provided his neighbours of their own choice and inclination determine to be poisoned or physicked by him. Each system has its advantages and evils. We doubt whether, on the whole, our's is not the best, at least for our REDUNDANT POPULATION. [If this be a joke in our contemporary, it may pass, as a very bad one; but if an argument, it supposes a lax morality in the matter of human life, which, however practically exhibited behind a druggist's counter, we scarcely expected to find openly avowed in the druggists' public organ.—ED.]

POOR LAW MEDICAL RELIEF.—The result of this war with the Poor-law Commissioners reads a significant but painful lesson to both parties. The commissioners have learnt the futility of a contest with the rights and feelings of the medical profession, and they must tacitly acknowledge the impolicy of their past course. The profession, on the other hand, have been taught the lesson which authority is constantly enforcing, that what is pertinaciously denied to justice must be conceded to clamour. This is the premium upon agitation which modern legislation so liberally holds out. The injured have but to render those in authority uncomfortable, and demands are then conceded which were previously denounced as monstrous.—The profession too have learnt the utility of a medical press. Their journals have carried this question for them. They have been the means of giving publicity to the resolutions of the bold, of encouraging the timid, and uniting all.—*Medico-Chirurg. Rev.*

ADVERTISEMENTS.

SLEEP AT WILL.

In a few days will be published, price 10s. 6d.,

THE ANATOMY OF SLEEP; or, the Art of procuring Sound and Refreshing Slumber at Will. By Dr. BINNS, Fellow of the Society of Antiquaries of Scotland, &c. The subjects treated of in this Work are, Life—The Brain—The Physiology of Sleep—Hibernation—The Sleep of Plants—Organic—Asphyxia—Trance—Cataplexy—Hallucination—Ecstasy (with two remarkable cases illustrative of this condition of the body, by the Earl of Shrewsbury)—Dreams—Somnambulism—Mesmerism—Sleeplessness—Means of Procuring Sleep at Will, &c.

The above is the first attempt by any medical writer to reduce the phenomena of Sleep to a system, by directing the activity of the cerebral organs. The Anatomy of Sleep, therefore, will be found interesting, not only to the profession, but to the public at large, for whom it is more especially intended. Another circumstance, which in the eyes of many will render the work a literary curiosity, is the fact, that it is entirely set up by the new patent composing machine of Messrs. Young and DeLaunay. A very small number, but five hundred copies are being struck off, consequently a very early application will be necessary to secure a copy. The work is illustrated by the new process of acrography, invented by L. C. Schomberg, Esq., and will contain upwards of three hundred pages. For the present, orders, directed to the Author, will be received only at the Office of the Medical Times, Wellington-street North, Strand.

HAMBURG, July, 1842.—His Majesty the Emperor of Austria, and his Majesty the Emperor of Russia, having authorised and guaranteed several DISTRIBUTIONS of MONEY DIVIDENDS, by which large fortunes may be obtained, HEINE BROTHERS, at Hamburg, are now selling genuine and warranted selected BONDS for the said Distributions. Persons desirous to purchase may receive, previous to giving any order, the prospectus, with full particulars, upon addressing, without delay, a line to

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As we receive frequently applications for Certificates, we must beg to observe that a Certificate is quite different from a Bond, and that there is a great difference again between Bonds and Selected Bonds—the Selected Bonds only taking part in the Distribution which follows the Selection, and which should never be overlooked, being of the greatest importance.

SOLUT. MAGNES. BICARB.—Dr. WILKINSON, of Bath, whose well-known familiarity with Practical Chemistry entitles his opinion to respect, says,—

"A Bottle of the Fluid Magnesia of Sir James Murray's, sent to me for Analysis by a Chemist in this Town, gave me Seven Grains of Magnesia and Three of Sulphate of Soda to the ounce, whilst yours yielded Seventeen Grains of PURE MAGNESIA to the ounce. I conscientiously bear testimony to the correctness of the above results."

(Signed) "C. H. WILKINSON, M.D."

"Dated October 23, 1840."

To Mr. C. DINNEFORD, Bond-street, London.

The above conclusive testimony is further corroborated by PROFESSOR BRAND, of the Royal Institution.

Dr. PARIS, author of the Pharmacologia, and Mr. MORGAN of Dublin, who also examined and reported on Sir James Murray's compound.

It has also received the sanction of SIR HENRY HALFORD, BART. President of the Royal College of Physicians, and the most distinguished Members of every branch of the Medical Profession.

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From J. G. Andrews, Esq., St. Helen's-place, President of the Royal College of Surgeons.

I have worn for some time the new patent boots called Impilia with much comfort and satisfaction. I find the boots possess great elasticity, evenness of pressure, and I am enabled to walk a greater distance without inconvenience.

J. G. ANDREWS.

April 20, 1842.

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ANTHONY WHITE.

April 6, 1842.

From Dr. Paris, of Dover-street, London.

I have examined and worn with comfort and satisfaction shoes constructed with intermediate soles of feet, to which you have bestowed the name Impilia. They undoubtedly possess an elasticity and capacity of adaptation to the form of the foot not possessed by ordinary shoes, and they have the rare merit of not creaking. They are, moreover, warm and dry.

J. A. PARIS, M.D.

From Dr. Roots, Russell-square, London.

Dear Sir—I have now worn for some time a pair of boots with intermediate soles, which you term Impilia. They are admirably adapted for the ease and comfort of tender feet, and the elasticity of their tread is very pleasant. I can with confidence recommend them for general use, while for medical men they possess the very rare advantage of not creaking, and consequently are so desirable in a sick room.

H. S. ROOTS, M.D.

W. Baker, Esq.—April 25, 1842.

From Dr. Hodgkin, Lower Brook-street, London.

Having not only examined, but put to the proof of experience, the patent soles invented by my friend Wm. Baker, M.R.C.S., and termed Impilia, I have no hesitation in saying that they are a very decided improvement on the common method of construction. They are not only much more agreeable to the sole of the foot, but promote a warm and uniform temperature as well as freedom from damp, whether entering from without or derived from the feet.

THOMAS HODGKIN, M.D.

30—4, 1842.

From John C. Taunton, Esq., M.R.C.S., 43, Hatton-garden.

I have worn with satisfaction the boots with the intermediate soles of Impilia. They are worn with more comfort, adapt themselves better to the form of the foot, and are impervious to wet.

JOHN C. TAUNTON.

May, 1842.

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LECTURES ON THE ANATOMY AND PHYSIOLOGY OF THE NERVOUS SYSTEM.

By Professor OWEN, F.R.S., &c.

In the gasteropodous mollusca, the nervous system presents less uniformity in the nature and position of its ganglia, than in the bivalve mollusca; and a more diversified condition of this system might be expected on account of the great variety in the external form of the body. Some species, for example, are shell-less and symmetrical, more or less flat; others are compressed; the majority are contorted and lose this symmetrical form in an oblique twist: then there are other diversities of organic structure which affect the condition of the nervous system, for some species possess both eyes and tentacles; whilst others are blind and akeros. In the Limpet (patella), and in the Bulleia, we find that the cerebral ganglia, as in the bivalves, are still distant from each other, and situated at the sides of the œsophagus, connected together by a nervous chord or commissure, not filled over that tube: from these ganglia two filaments proceed backward on either side; the median and superior pair pass along the sides of the œsophagus, converge and meet below to form a pair of ganglia in close contact with one another which supply the part and viscera. These are evidently analogous to the bilobed pedal ganglion of the muscle. The lateral and inferior filaments, analogous to those called neural filaments in the Ascidæan, pass downwards to join two widely-separated branchial ganglia, analogous to those situated on the posterior adductor in the mussel. We observe, however, a considerable difference in the relative positions in the pedal and branchial ganglia in the Limpet; the latter are in advance, proceeding into close contiguity with the pedal ganglia, and being connected with them by the same transverse chords, which in the Pecten and Mytilus serve merely to bring the branchial ganglia themselves into mutual communication.

Upon the whole, therefore, we find in the present low organised encephalous mollusca a general tendency in the nervous system towards the fore-part of the body, the cerebral ganglia rising more to the upper surface and the now well-developed head, and the branchial and pedal ganglion beginning to concentrate themselves about the mouth. But this march of development does not prevent the homologies of the different ganglia from being satisfactorily traced. Now, however, there is a distinct head and mouth, with organs of special sense; and besides the large antennal and small ophthalmic branches given off from the cephalic ganglia, we find also a superadded ganglion in the patella, having evident relation to the muscular parts; the mouth and complex tongue, which are so many accessory parts appended to the simple opening of the gullet, with which the alimentary canal commences in the bivalves. The additional ganglia in question are placed below the pharynx, and are brought into com-

munication with the sentient ganglia by a filament continued downwards and forwards from each of these ganglia. They also inter-communicate by a loop which forms a rudimentary ganglion beneath the œsophagus completing an anterior ring corresponding to that which is formed by the means of the pedal ganglion posteriorly. The ganglia corresponding to the pedal pair in the Bulleia appear not to be joined together by a transverse band, but to be connected only with the branchial ganglion, and through them with the cerebral ones. The three are placed so close together, that Cuvier describes them as forming one mass. There are two pharyngeal ganglia formed of filaments descending from the cerebral ganglia. The labial ganglia, which are developed in addition to the pedal ganglia, originate from the latter, in the Bulleia Lignaria, and are connected with the cerebral ring only through them. In the Halyotes, the superior or œsophageal part of the œsophageal circle is still a simple commissural chord. The sides of the circle are formed by a double chord, which unite below in a single branchial pedal ganglion, from which the visceral as well as the branchial and muscular nerves radiate. In the Doris and Onchidium the cerebral, pedal, and branchial ganglia are coalesced into one annular mass, which however is chiefly supra-œsophageal in its position, united below by a slender chord passing across the under parts of the œsophagus. Two small nerves are given off, which descend and form two small pharyngeal ganglia, which, according to Cuvier, are united together. In the Doris Solea the quadripartite character of this large mass was more obvious.

The nervous system of the slug and snail was then described, after Cuvier, and the additional discoveries by Brandt, of the visceral nerves analogous to the stomato-gastric in insects, were pointed out.

In the Aplysia the branchial and pedal ganglia are blended together; the combined masses of each side being joined together by a sub-œsophageal chord, and brought into communication with the cerebral ganglia by ascending and converging chords. The cerebral ganglia are also joined together above the œsophagus, and assumes the form and position of a true brain. They supply nerves to the tentacula, and give off anteriorly two chords, which turn forwards to join below the mouth, where they form the pedal ganglia. An accessory branchial ganglion is situated towards the posterior part of the body; the connecting chords of this ganglion may be traced directly to the brain. The position of the cerebral ganglion varies according to the degree of extensibility of the mouth and œsophagus. Thus, in the Helix, they are placed above the mouth; in Carocolla, at the commencement of the œsophagus; in the Buccinum or Whelk, low down in the tube; in the Purpura, beneath the stomach.

As a general rule, we find that the superior ganglia give off tentacular, ocular, and oral branches, whilst the inferior masses are the centres of the muscular, respiratory, and visceral internuntiate chords. In the spiral univalves, where the branchiæ and their nerves are twisted to the left side, it is the left branch which is atrophied, while the right one is of large size. The nerves are similarly affected, the left one being atrophied whilst the right is not, and has the accessory branchial ganglion developed upon it. The principal œsophageal ganglionic circle is surrounded by a thick membrane, which in the large Tritons assumes almost a cartilaginous hardness. A coloured pigment is not unfrequently found occupying a position analogous to that of the arachnoid, between the dense outer membrane and the ganglia. In the Lymnaea and in the Planorbis this pigment gives to the cerebral ganglia a roseate hue.

Amongst all this diversity in number, size, in

position of the nervous masses, certain ganglia are obviously analogous to those which have received determinate nerves in the bivalves. The branchial ganglia receive impressions from and transmit them to the gills, communicating also with the brain, and through that to all other parts of the body. The pedal ganglion is more commonly divided than in the bivalves, and the two divisions are wider apart in consequence of the great breadth of the foot. In these also, which possess a naked muscular mantle, we find a distinct pallial ganglion as in the Aplysia. The cephalic ganglion becomes an optic one from the constancy and better development of the eyes; these ganglia are always larger than in the Acephala, and more decidedly superior in position. When separate they are united by a thicker communicating chord, and are larger in proportion to the nerves given off from them. With these likewise, we find connected the labial and pharyngeal ganglia, in which, perhaps, may reside the olfactory sense; it is certain, at least, that snails scent their food, but as regards the other ganglia of the body, their actions seem to be limited to the automatic reception and reflexion of stimuli. Soft and lubricated and sensitive as the skin of the naked Mollusks seems to be, there are not wanting reasons for supposing it to be possessed of a very low degree of true sensibility. Baron Férussac, for example, states, that he has seen the terrestrial Gasteropods, or Slugs allow their skins to be eaten by others, and, in spite of large wounds thus produced, show no sign of pain.

ORFILA'S LECTURES ON ARSENIC.

Containing an Account of the different Operations performed upon the Body of Laffarge.

Collected and Translated by JOHN DAL PIAS, Pharmacien and Laureate of the School of Paris.

LECTURE IV.

GENTLEMEN,—The medico-legal question of poisoning by arsenious acid formed a part of our last lecture; we commenced by resolving the problems we had proposed, and we described the procedure by which metallic arsenic may be extracted; first, from the liquid ejected and that contained in the digestive canal; second, from a decoction of the stomach and intestines; third, from the solid matters remaining on the filter. I have practically demonstrated to you my method of carbonizing by nitric acid, the subject of which shall be continued to-day. But before I proceed I wish to call your attention to the following operation which will be completed before the termination of this lecture.

This dog has been poisoned with eight grains of arsenious acid. We will first carbonize the urine, and then about one-eighth part of the liver. You may observe, there is only a small quantity of urine, about half an ounce; I am afraid we shall not be able to extract any sensible quantity of arsenic from it; from the eighth part of the liver I am certain we shall have a sufficient quantity to allow of our examining its physical and chemical properties.*

You perfectly understand now the advantages resulting from the carbonization by nitric acid; I may, therefore, say a few words upon our mode of operating at Tulle. Our first operation was performed upon a fourth part of the stomach, which had been well washed and afterwards preserved in alcohol; we carbonized it by means of nitric acid, and boiled the charcoal, thus obtained, half an hour in distilled water; the filtered decoction submitted

* What Monsieur Orfila asserted proved quite true. In the course of the lecture one of his assistants, who operated in sight of the numerous assembly, obtained arsenical stains from the liver, but the urine only yielded yellow stains, which were not in sufficient quantity to be chemically examined.

to the action of Marsh's apparatus afforded sixty well characterised stains of arsenic.

A portion of the liver carbonized in the same manner also afforded a great many arsenical stains; another portion allied to fatty matter was incinerated by nitrate of potash, this produced a similar result.

Incineration by Nitrate of Potash.—I must now describe to you the mode of incineration by nitrate of potash, which should always be resorted to in those cases when the substance to be examined contains fatty matter; if, in these cases, we adopted the nitric acid process, we should have formed a bituminous kind of charcoal, which, when boiled in distilled water, would yield a decoction quite unfit for Marsh's apparatus in consequence of the quantity of froth it would produce.

To incinerate by nitrate of potash, the matter must first be boiled for a few minutes in a saturated solution of this salt, adding water, at intervals, as it evaporates; the whole must then be evaporated to dryness, and the mass obtained reduced to a gross powder, by rubbing it in a porcelain mortar: small quantities of this powder must then be thrown, at intervals, into a Hessian crucible heated to redness. Each portion projected into the crucible produces a strong deflagration, emitting at the same time copious foetid fumes. By this operation the animal matter is entirely destroyed, provided a sufficient quantity of the oxygenated salt has been employed; which may always be ascertained by the character of the residue. This should present a slight greyish colour; if, on the contrary, it has a black appearance, we may conclude all the animal matter has not been destroyed.

The theory of this operation is easily explained in the following manner. The nitrate of potash is decomposed, a part of its oxygen combines with the greater part of the carbon of the organic matter, to form carbonic acid, which again combining with one part of the potash forms carbonate of potash: another portion of oxygen transforms the arsenious acid into arsenic acid, which in its turn combines with a second part of potash to form arseniate of potash. Besides this there is formed water, ammonia, and a small quantity of cyanogen, in consequence of the reaction which, in such cases, takes place between hydrogen, oxygen, carbon, and azote. A small quantity of nitrate of potash remains undecomposed; there is also formed a small portion of nitrite of potash.

Thus we have remaining a mixture of carbonate, arseniate, nitrate, and nitrite of potash, all soluble salts. The crucible being removed from the fire, is allowed to cool, until the mass which is in a state of fusion has acquired a soft consistence; distilled water is then added, in small quantities, to dissolve the saline matter, and to the liquid thus obtained a certain quantity of sulphuric acid must be added gradually, to dispel the carbonic and nitrous acids; this precaution is necessary, otherwise the mixture when introduced into Marsh's apparatus might produce an explosion in consequence of the sudden disengagement of these gases. The liquid then contains no other salt than sulphate of potash; the nitric and arsenic acids remaining in the solution; the former of these acids being expelled by boiling, the mixture may then be introduced into Marsh's apparatus. Arsenic acid being a fixed acid no fear need be entertained of its escaping during this last operation of boiling.

When this operation has been properly conducted there is never any froth produced, if, in fact, all the animal matter has been completely destroyed; in this respect the mode of carbonizing by nitric acid is not so perfect, and does not always produce such good results.

Gentlemen, you have heard me speak of arsenic being found in the urine, the liver, the kidneys, the lungs, &c. How can we account for the presence of this poison in these organs? Is it not evident that physiological phenomena take place in such cases? Yes, certainly; and such is what we term absorption.

Absorption.—It is a long time since I ascertained, by repeated experiments, that most poisons were absorbed; and as early as 1812 I had published my observations upon that subject. Re-

garding the absorption of arsenic I was fully convinced, after having made the following experiment. I introduced a solution of arsenious acid into the stomach of a dog, and after applying a ligature to the œsophagus, I opened him; I then pierced the aorta and obtained blood, which, by analysis, I found to contain arsenic; the lungs, the kidneys, the liver, the heart, &c., also yielded arsenic; but the liver, being the most vascular organ of secretion, contained the greatest quantity of the poison. It was the result of these, and many other experiments, that induced me to publish the following assertions.

1. The various organs, such as the liver, the heart, the kidneys, the brain, &c., always contain arsenious acid in cases when this poison has been administered.

2. Arsenic can never be obtained from these organs when they are in a normal state; if contrary results occur, this poison must have been administered.

3. The urine of a dog poisoned by arsenious acid, yields metallic arsenic.

What but a knowledge of these facts led me to adopt the method of carbonization; and why do I prefer certain parts of the body for my experiments? Experience has taught me, Gentlemen, that this poison is absorbed by the blood, and that certain organs, by their particular mode of acting, will retain a greater proportion of it than others. The liver, for example, being a secretory organ, will retain a great quantity of the poison; the brain, on the contrary, generally retains so small a quantity as to render it impossible to be detected. As a general rule, the more vascular are the organs, the greater the quantity of arsenic retained.

Consequently, resuming what I have to say upon carbonization, I take the kidneys, the liver, the spleen, and the heart; I carbonize them with nitric acid, supposing these different organs to be in a fresh state; if, on the contrary, they were in a state of putrefaction; if they were extracted from a body exhumed and decomposed, I should adopt the mode by nitrate of potash. But as you may be often placed in the presence of a jury composed of men not easily to be enlightened upon such operations as these, it becomes necessary to afford them as many proofs as possible. Therefore, instead of carbonizing the whole matter, boil one part in distilled water for about five hours. This length of time is actually necessary; it has been ascertained by experiment, that in some cases the animal matter is so strongly united with the poison, as not to be entirely detached even after boiling six hours. The filtered decoction is then conveniently evaporated, and treated by alcohol and sulphuretted hydrogen; the sulphuret thus obtained is finally decomposed by charcoal and carbonate of potash.

By this mode of operating, you will be able to prove the existence of the poison by two distinct methods; you will arrive at the same point by following two different ways; you will show the jurymen poison extracted by decoction and carbonization.

In the Tulle affair, we boiled the mesentery in distilled water, filtered and evaporated the decoction, and afterwards carbonized the residue by nitric acid; from this we obtained a still greater number of stains. Here we have two operations giving positive results and without the aid of nitrate of potash. Nevertheless, it has been said the proofs of arsenic were derived from the impurity of the nitre we had made use of, and not from the organic matter.

When I repeated my experiments in public, and before the Commission of the Institute, composed of Messrs. Dumas, Boussingant, and Renaud, I perfectly demonstrated that no nitrate of potash I had examined contained the slightest indication of arsenic, and I had examined samples brought from all directions. Even supposing it were true we had brought impure nitre, nitre containing an arsenical compound; had we not obtained metallic arsenic from two operations, in which not a single atom of nitrate of potash had been used?

But we had to operate upon matter exhumed, and which was in an advanced state of decomposi-

tion; several of the parts could not be safely analysed without the aid of nitrate of potash; we were thus compelled to have recourse to this salt by which we obtained more arsenic than from the two preceding operations.

The advantage of these two methods consists in their enabling the experimenter to conduct his analysis with only a few re-agents. The prisoner's counsel never fails to attribute the presence of the poison to the impurity of the chemicals made use of, and not to the matter acted upon; you will, therefore, see how much easier it is to refute this assertion, when you have to make your statement upon three or four tests only.

Innumerable objections have been made, but I am not astonished at that, for I myself offered a great many at first; nevertheless, I never said nitrate of potash was susceptible of containing arsenic; I have analysed many varieties of this salt, but have never yet detected the presence of this poison.

But I may be asked whether the arsenic thus obtained was not contained in the body in a normal state? To this question I can reply in a very decided manner. No arsenic has ever been found in the viscera of man, or of any other animal; moreover, I assert that no stains whatever can be obtained when carbonization is effected by means of nitric acid or nitrate of potash, provided the operations have been properly conducted; if, in cases of carbonization, stains have been produced, it is because sulphuric acid has been made use of.

These facts being now well established, I shall proceed to give you the history of Marsh's apparatus.

In 1775, Scheele, a Swedish chemist, discovered that arsenuretted hydrogen, when inflamed, formed water, and deposited metallic arsenic. Proust has since confirmed this statement. Lervallus, when speaking of arsenuretted hydrogen, about fifteen years since, says, "I think great advantage might be derived from its application in medico-legal investigations upon arsenious acid."

In 1837, Marsh, an English chemist, having undertaken a medico-legal analysis upon matters suspected to contain arsenious acid, thought what had been stated by the above-named chemists might be applied with advantage; he therefore constructed the apparatus I now place before you.

It consists of a large glass tube bent in the form of an U fixed upon a wooden support by means of leather bands; one end of this tube remains open, the other is closed by means of a stop-cock terminating in a fine point, similar to that of a blow-pipe; a lump of zinc is sustained in the short branch by means of a bent tube of a smaller diameter, which is introduced into the bottom part of the apparatus. The apparatus being thus disposed, Marsh then mixed sulphuric acid with the liquid to be analysed, and introduced the whole into the apparatus through the aperture of the longer branch. As soon as the liquid comes in contact with the zinc, a re-action takes place with the disengagement of arsenuretted hydrogen gas, which, being ignited at the stop-cock extremity, will deposit arsenical stains when a cold surface is presented to the flame.

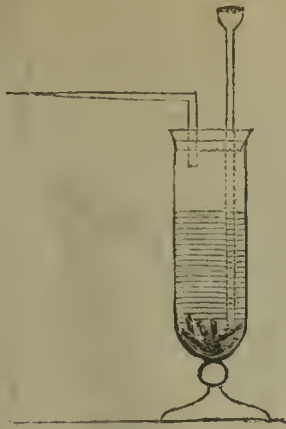
But Marsh himself soon discovered of how little value this apparatus would be in cases when animal matter was contained in the suspected fluid; in such a case, it is impossible to obtain a disengagement of gas, in consequence of the great quantity of froth produced. He then thought to remedy this evil by introducing a certain quantity of olive oil upon the surface of the liquid contained in the shorter branch; but this was found to be of little service.

You may now have an opportunity of witnessing this inconvenience. Here is a decoction of animal matter; I combine with it a certain quantity of sulphuric acid, and introduce the mixture into the apparatus. Observe how the froth is immediately formed, and issues out at each extremity. You must now be convinced that such a form of apparatus cannot be used with any advantage.

Monsieur Chevalier soon modified Marsh's instru-

ment; this is the one he proposed as a substitute for it.

Fig. 1.



It consists of an eprouvette, to which is adapted a bung pierced with two holes; through one of these passes a tube, reaching to the bottom of the vessel, and terminating at its outer extremity in the shape of a small funnel. Through the other hole is introduced the short branch of a tube bent at a right angle, and terminating at the outer extremity in a fine point.

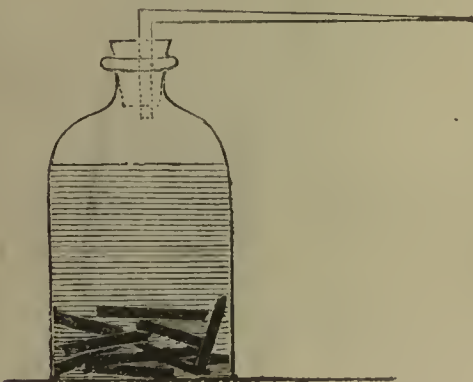
Monsieur Chevalier first introduces the zinc; and afterwards the suspected liquid and the sulphuric acid through the long tube.

After the modification of Monsieur Chevalier, we have others in great number, of which Monsieur Adorne's is certainly not the best or the least complicated. It consists of a wide-mouthed flask, on the side of which is adapted a thick tube drawn to a fine point; to this tube a stop-cock is arranged. Upon the superior part of this flask there is placed a globular vessel of which the inferior part terminates in a tube reaching the bottom of the flask, and at the same time closing hermetically its superior aperture; the superior part of this globular vessel has an aperture closed by a glass stopper.

The object of this vessel is to receive all the froth which may be formed, but unfortunately for this purpose it is of little or no use. Now that I have charged the apparatus, you may observe the froth issues from the stop-cock at the same time that it rises in the superior vessel; consequently this apparatus is, in no respect, better than the original one constructed by Marsh.

For my part, I have also adopted an apparatus which you have seen used since the commencement of our lectures upon arsenic; I think it should be preferred on account of its simplicity.

Fig. 2.



It consists of a flask closed by a cork pierced with one hole only, through which I introduce a tube bent at a right angle, and having its external branch drawn to a fine point.

When I want to make use of it, I take out the cork and introduce the water and sulphuric acid, and finally, the suspected liquid. I wait some time to allow the mixture of hydrogen and atmospheric air to escape; then I inflame the gas and present a porcelain capsule to the flame.

Whatever form of apparatus we make use of, it is quite certain we shall never be able to counteract the production of froth; it is, therefore, necessary to entirely prevent its formation. We have already stated that Marsh thought of remedying

this evil by the addition of olive oil; but he does not state at what time this should be introduced. Nevertheless, it is necessary you should be acquainted with this fact; that when olive oil is added after the sulphuric acid, it does not answer the purpose to that extent which might be expected.

It may be asked whether olive oil does not impede the disengagement of the gas? Certainly not; at least not in a sensible degree. Alcohol has been proposed as a substitute for the oil; this would certainly be a very good remedy, considering that alcohol coagulates animal matter; but unfortunately, it prevents the disengagement of the gas; in what way, then, can we surmount this great difficulty?

I dare say you can reply to this question, since you have witnessed our procedures by carbonization and incineration, which, I again repeat, have for object the entire destruction of animal matter, thereby preventing the formation of froth.

OBSERVATIONS

On the Evils arising from the Use of Common Pessaries.—The Operations recommended for the removal of Prolapsus and Procidentia Uteri; and the Introduction of a New Pessary as a safe and effectual Substitute for both.

By CHARLES CLAY, M.D., Coll. Reg. Lond. M.R.C.S., Lecturer on Medical Jurisprudence, &c., Piccadilly, Manchester.
Read before the Medical Section of the British Association, June 28, 1842.

"The use of Pessaries, so often employed in the practice of those who devote themselves to the treatment of the diseases of females, is attended with so many disagreeable and unfavourable circumstances, that a reform has become absolutely necessary."

DIEFFENBACH.

(Concluded from p. 324.)

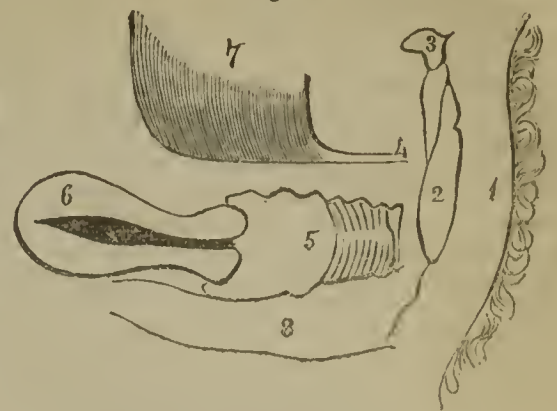
Excision of a Portion of the Vaginal Coats.—I now come to an operation practised by Professor Dieffenbach, of Berlin, an individual certainly who has challenged the admiration of the profession for the brilliancy, boldness, and originality of his conceptions; the improvements established by him have produced a new era in operative surgery. In respect, however, to the operation for prolapsus uteri, I am compelled reluctantly to make great objections, and those principally on the same grounds as I have done for those of episioraphy and actual canter, viz., *producing permanent strictures of the vaginal outlet*. The mode pursued by Dieffenbach, is the excision of a portion of the mucous or lining membrane of the vagina, and the cases he brings forward as illustrative, are, to a certain extent, both successful and valuable. But what is the fact? Like episioraphy and canter, it is only a means of preventing prolapsus from becoming a procidentia uteri, by producing a permanent prolapsus; in plainer terms, the uterus is prevented from protruding in consequence of the stricture formed by the destruction of a portion of the anterior part of the vaginal canal, which it is impossible to effect without in some degree interfering with subsequent menstruation, conception, and parturition, in cases where females are of an age to render such prospects probable. The obstruction to the great laxity required during the efforts of parturition at the outlet, as well as the accomplishment of coitus under such circumstances may be easily conceived; and as to menstruation, it is impossible to contract the outlet without giving rise to the probability of such secretions, often vitiated, collecting and producing mischief immediately behind the contracted portion, forming a pouch favourable to such accumulations; I must then without hesitation condemn all such operations as I have quoted, because they do not in any degree establish, or have any tendency to establish, the natural condition of any of the parts which are concerned.

Extirpation of the uterine mass can scarcely come within the limits of this paper, inasmuch as it is only resorted to under peculiar circumstances, and where the uterus is incapable of being returned.

Such are the doctrines of those who advocate the principles of contraction by forming a stricture in the anterior part of the vagina, or diminish the aperture at the entrance by forming an adhesion of the labia.—Though it cannot be denied that such means may remove or prevent procidentia uteri from reappearing, yet I maintain they have not the least merit in curing prolapsus.

The form of stricture alluded to is illustrated in Fig. the 6th.

Fig. 6.



There are still other means in use unconnected with either of the plans hitherto spoken of; and whatever may be their merits as curatives, there is no denying their claim to notice, if only on the ground of banishing cruelty.

The T Bandage.—Many years ago, Professor Hamilton, of Edinburgh, proposed the use of a well adapted T bandage, the principles of which are to a certain extent revived in Hull's abdominal supporters when properly applied; it is quite as effective in preventing a return of procidentia as any other means, but it is quite evident that a prolapsus is not in the least benefited by it. I admire the simplicity of the T bandage, but where a procidentia uteri exists, a prolapsus uteri has previously existed. The curative intentions, therefore, should embrace both to deserve credit. Hull's abdominal supporters are an improvement on the T bandage, and are capable in some degree of effecting some good on prolapsus as well as its sequiter procidentia, by lifting or supporting the abdominal with the pelvic viscera; the effect, however, is not sufficiently direct on the parts requiring it most. Pregnancy often effects a cure on prolapsus and procidentia; but the following case forwarded to me by W. C. Vandrey, Esq., of Bredbury, near Stockport, proves an exception to it. "I was called to — June 25th, 1841; a spare woman, æt. 38; she complained of a bearing down and extreme tenderness over the abdominal region, particularly in the direction of the uterine ligaments. On examination, I found a procidentia uteri, about the size of a three months' impregnated one, highly sensitive to the touch, and very hot. I with some difficulty succeeded in reducing it in situ; the usual treatment, with a recumbent position, effected a cure. On the 11th of Dec., I attended her in labour of a full-grown healthy child, consequently she was three months impregnated when the procidentia occurred; she had no previous prolapsus. After her accouchement she suffered considerable inconvenience from the laxity of the parts, but as yet will not consent to wear any mechanical support." I shall now briefly advert to some of the evils arising from the use of common pessaries, and on this subject I cannot do better than quote the celebrated Dieffenbach. "The use of pessaries, so often employed in the practice of those who devote themselves to the treatment of the diseases of females, is attended with so many disagreeable and unfavourable circumstances, that a reform has become absolutely necessary. The method which consists in supporting the prolapsed uterus, or vagina, by the introduction of a solid foreign body, a pessary, into the genital organs, is just as rude and imperfect an operation as the introduction of a pessary, or other mechanical means, would be for the cure of prolapsus of the anus. When I reflect on the great inconveniences I have seen arise from the use of pessaries continued for a great length of time, and in many cases actually forgotten, in the genital organs of the female, I am almost inclined to banish them completely from my practice. I have frequently seen them produce putrid discharges from the vagina; in other cases dilatation of the vagina to a most inconvenient extent; in others contraction of the same organ; and, finally, in other females, the still more dangerous accidents of cancerous or fungous productions from the vaginal mucous membrane. Sometimes I was able to extract the foreign body with my fingers

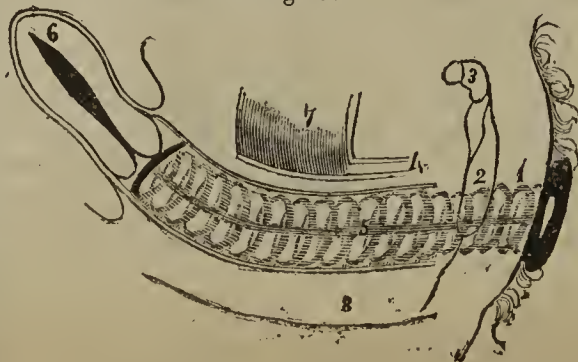
but in many other cases it was necessary to break it up with strong forceps, before the fragments of a stinking encrusted substance, whose composition could not easily be determined, was removed. Several patients laboured under excessive irritation of the bladder, and when the foreign body was large, many suffered for years under obstinate constipation. Meyer extracted a pessary, composed of a large porcelain tube, which had produced ulceration of the vagina, and perforation into the bladder with one of its edges, from which the glazing was worn off. On examining the body of a very old woman, who for many years complained of pain, &c., in the lower abdominal region, I found an encrusted pessary in the cavity of the uterus. Dupuytren once extracted a large pomatum-pot, which an accoucheur had introduced for a pessary; and on another occasion, a large metallic gridiron-shaped body, whose bars had given passage to fungous excrescences. The indolence and negligence of the female can only explain those cases in which, notwithstanding the presence of a pessary, women have menstruated, copulated, become pregnant, and even been delivered of a full-grown child. Some women actually seem to have forgotten that such an instrument was ever introduced, others obstinately deny the fact. I have seen two cases of the latter; and in general, the avowal of employing a pessary or a truss is often more painful to a female than the very diseases which demand their use."

I may add to these observations my own, in a post-mortem examination some years ago, on the body of an elderly female, whose death had been attributed to brutal violence; I found a stricture in the vaginal canal, on cutting into which I discovered a ring pessary, nearly three inches in diameter, which must have been in that situation many years. It is impossible to deny that serious interference often takes place in the functions of the bladder and rectum, easily accounted for in the mal position of those organs as observed in *figs. 3 and 4*, and the blocking up of the vaginal canal with such outlandish machines must also interfere materially with conception and menstruation. I have had many cases of obstinate pruritus caused by such applications, whilst *as has been stated* inflammation, ulceration, and tumescence are very common results. A curious case has been forwarded to me by W. C. Vandrey, Esq., an intelligent surgeon near Stockport, showing the forgetfulness of females, the case not being one of prolapsus or procidentia; it is not strictly applicable to this essay, nevertheless its singularity will be a sufficient excuse for its introduction. "Mrs. B., æt. 52, sent for me on the 6th of Nov., 1838; on my arrival, I found what I at first conceived uterine hæmorrhage. She had fallen against a chair, and by the time of my arrival had lost a considerable quantity of blood. She had ceased to menstruate three years, and enjoyed excellent health. On examination per vaginam, I found a hard substance with a sharp cutting edge. It was not till now she acknowledged having introduced a small tumbler-shaped glass, capable of holding about one ounce, or one half ounce, such as is used in liquor vaults, about 10 years previous, since which it had never been removed, and had been forgotten. Having extracted the splintered portion (which had of course been broken by the fall and caused the hæmorrhage), I proceeded to extract the remainder, during which the hæmorrhage continued rapidly. She recovered without a bad symptom. The singularity of the case arose from this; no prolapsus previously existed to call for such support; it was evident, and the opinion was confirmed by the evasive answers given, that the glass was introduced to prevent conception, and certainly it was a curious mode to effect such a desirable circumstance to an impoverished family." All pessaries hitherto used having these faults, it appears strange that they should have been patronised so long by medical men, a fact I cannot explain, but by supposing that mechanical contrivances are considered beneath the study of practitioners in medicine and surgery, and consequently we are obliged to look for improvements to surgical instrument-makers, who lacking medical knowledge often commit great errors which medical men scarcely ever take the trouble to rectify. It is from a knowledge of these facts that I have pre-

sumed to suggest to the profession a new pessary, which I am anxious should be free from the evil tendencies common to those now in use; a pessary that not only secures all the advantages obtained by those in use, but also avoids the errors attached to the previous plans; and, lastly, holds out advantages never contemplated (at least never practised) before, entirely doing away with the necessity of operations, and allowing the parts injured to assume their natural state, facilitating the application not only of constitutional, but of *local remedies*. Before drawing your attention to the means I have to propose, I would first refer you to *fig. 1*. If that is the natural position of the parts, what means would be best adapted for keeping them in that position, should they unfortunately deviate from it? Observe, its character is a tubular canal, slightly curved upwards, of a certain length and breadth; should the lateral walls of that canal become relaxed, that is, have a tendency to loss of tone, then it is evident the two points at either extremity of that canal will approach each other; this may be illustrated still more plainly by *fig. 5*: thus place two bodies at a certain distance from each other connected by two lines, the greater distance the lines are drawn asunder, the nearer the bodies approach each other. You have only to conceive one of these bodies to be the uterus, and the other the os externum, and you have the illustration borne out as in *fig. 2*. Hence, it is plain all the old pessaries separate the lateral walls of the vagina to a greater distance; consequently the result is, the uterus is dragged forcibly towards the os externum, as in *figs. 3 and 4*; and although such means may prevent a protrusion of the uterine mass, it is at the same time self-evident the uterus can never regain its proper position. The *figs. 3 and 4* give but a faint idea of the extent to which the vagina is often dilated under such circumstances. I have now shown you the position of the parts in a healthy state, the manner in which they become deranged, the plans hitherto devised to correct the evils, all of which are at variance with the structural arrangements of the parts. It now remains for me to point out what should be done to secure the proper result, viz., a healthy tone and natural position of each organ. The tubular canal *must not* either be extended or contracted in length; its lateral walls *must* be kept at the natural distance, and the uterus *must not* only be prevented from protruding without the os externum, but kept at the required distance: these points gained by mechanical contrivance, constitutional treatment, and local applications, must do the rest towards placing the invalid in a proper position in society.

The instrument I wish to substitute consists of a strong coil spring, made of silver or German silver, the length and circumference of which does not exceed the vaginal canal in its normal state; at the end introduced into the vagina is a ring of hard wood or metal, a trifle larger in its circumference than the coil, and on which the os uteri rests; at the opposite end is a shield of the same material to rest against the os externum. The coil is as close as it can be to preserve its elasticity, and two or three slips of india rubber, threaded along the coil its whole length, to prevent the possibility of the lining membrane of the vagina from getting between the coils; an india rubber cork to fit the hole in the shield, to which is attached a long finger-shaped sponge, which serves the double purpose of absorbing any vitiated discharges, as also to charge with lotions for improving the canal; the whole is secured firmly by bandages, and when introduced, would have this appearance, *fig. 7*.

Fig. 7.



The instrument when freed from the body is as *fig. 8*. The bandages when applied would be in

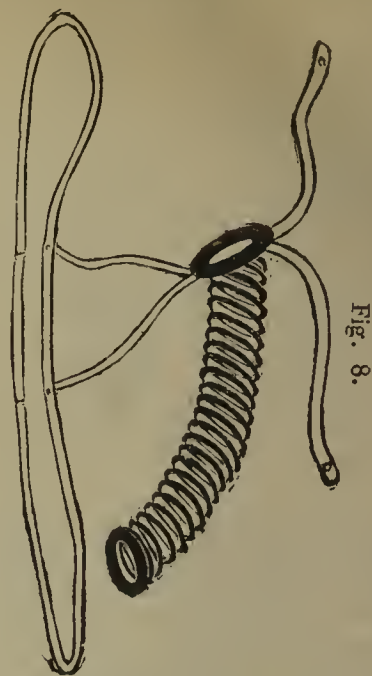


Fig. 8.

front view as *fig. 9*; back view, as *fig. 10*.

Fig. 9.

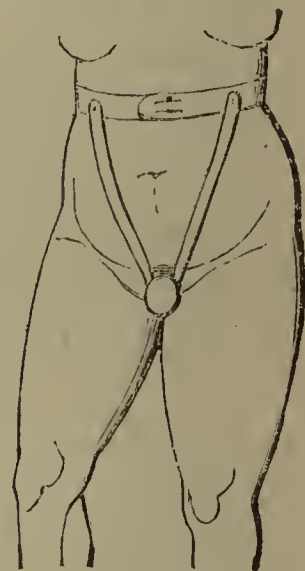


Fig. 10.



The whole is a contrivance so simple, that I conceive these explanations will be sufficient for any one. As a means, its merits do not rest on theory or hearsay. I have had ample proof of its efficacy in from seventy to eighty cases from all parts of the kingdom, and have very frequently tried it myself with every success I could wish for. On directing your attention to the diagrams 1 and 7, you will perceive every part in its proper position; no straining or uncomfortable stretching, no liability of being forgotten, no danger of being left behind, no dilatation, no stricture produced, and the openness of the coil admitting injections freely in contact with the vaginal coats. It has been worn in many instances two or three months without pro-

ducing the slightest irritation. Finally, I believe it an instrument calculated to effect all it proposes to do. There are a few points necessary to be attended to, as directions for its application, but as these accompany each instrument, I shall not dwell upon them, but merely read them over.

If the case be one in which the prolapsus retires when in a recumbent position, the pessary should be taken out every evening after lying down, and replaced before rising in the morning; but if the contrary, it had better be kept in night and day for a week or two at first, taking care to move it occasionally. The instrument to be well oiled every time it is introduced. When the urine is to be passed press the outer ring downwards with the point of the finger. When introduced dip the sponge in the lotion and place it in its position. Whenever the instrument is withdrawn the same lotion should be used with a female syringe as often as convenient. The lotion best adapted for the purpose is

R. Zinci Sulphatis grs. x.
Aque Puræ f. ʒxvi.

This may be copied, and obtained from any surgeon or apothecary.

I now leave the subject to this meeting, and as I derive as much pleasure in receiving as in giving information, I therefore earnestly desire every gentleman to speak freely his opinion; if the means are faulty give me an opportunity of correcting them, and if on correct principles I trust there will be no hesitation on their parts in acknowledging the same.

CURABILITY OF CONSUMPTION.

To the Editor of the 'Medical Times.'

SIR,—The question of the curability of consumption having been affirmatively determined by the pathological researches of Laennec and others, both on the Continent and at home, the popular and professional mind, it may be presumed, is favourably disposed to receive statements of competent authority, explanatory of the manner in which nature operates, and remedial art may assist in arresting or curing this formidable disease. The distinguished pathologists who have favoured us with the result of their valuable labours in this department of medical science, seem to have rested content with giving a new impulse, and more enlightened direction to the study of a difficult subject. Their numerous facts remain unexplained, and lead to no practical conclusions; they have cleared away much of the rubbish of antiquated and erroneous theories, but suggested nothing practical: I desire to contribute my mite to supply this deficiency, first by attempting to show how nature works in her curative efforts, and then how she may be successfully imitated or supported by remedial art.

By phthisis, I understand the deposition of tuberculous matter in the substance of the lungs, which unless checked by nature or art, so far deranges or destroys their structure as to render them unfit for their vital office in the system. Tuberculous deposit almost invariably commences in the summit of one or both lungs, and if unimpeded, gradually descends to the lower lobes. Catarrh has been considered as one of its most frequently exciting causes; however opposed to established notions, I assert that catarrh is not, and cannot be, a direct cause of this disease. An inflammatory state of the mucous membrane lining the bronchial tubes has no necessary connexion with this deposit of tuberculous matter. It may, when severe, promote its liquefaction and consequent expulsion, but in doing so, tends to establish a condition which protects the lungs from further injury. It is, in fact, one of the principal agents by which nature effects a cure.

The existence of tubercles and of cavities secreting pus is not incompatible with life. The danger lies in the successive and continuous formation of tuberculous matter, and not in the liquefaction and elimination of a portion of it. So long as the lower lobes are free, the patient rarely dies from phthisis; but it may be mentioned incidentally, that a great many patients die under

the secondary affections. Autopsy displays the lungs in various states and stages of tubercularization. A very considerable proportion of the population of this country have, or have had, tubercles in the lungs; and were it not for the existence of natural and artificial impediments to this disease, would be diminished by at least one-half.

I have said that catarrh is one of nature's grand remedial agents in consumption, and am prepared to produce cases in proof of this assertion, sufficiently numerous and well attested to convince even the most sceptical. I have now before me a letter from a highly respectable solicitor, illustrative of my statement. His father had in early life exhibited unequivocal signs of consumption, and was despaired of by the physicians of Naples. Business obliging him to repair to Newfoundland, he contracted catarrh in that cold climate, under which he laboured during the remainder of his life, which terminated in his 84th year. We need but to look around us over the circle of our acquaintance to find ample proof of these views. *Si monumenta quaeris, circumspice.* We shall observe persons in youth, middle life, and old age, suffering from what is called a constitutional cough, and yet otherwise enjoying good general health, some even living to the most advanced term of human existence, and carried off ultimately by a disorder unconnected with phthisis. If the early history of many of these cases be traced, it will be ascertained that the catarrhal state had been preceded by the characteristic signs of phthisis—the hectic fever, perspirations, purulent expectoration, &c.;—that the catarrh, in fact, supervening on consumption, had arrested, and masked, or cured it. The lungs too of these persons shall exhibit, on dissection, unquestionable vestiges of tubercular disease.

The supervention of asthma, either as a consequent on chronic catarrh, or in its idiopathic form, arrests the progress of tubercular deposition, and renders inert and harmless tubercles previously formed. I would appeal, in proof of this, to the experience of every practitioner. In the entire range of a practice, which has not been limited, a case of pure asthma dying from consumption has not occurred.

What I am now about to state may not be unworthy of attention. *Enlarged tonsils* have the effect of arresting phthisis. To those who doubt this, I should merely say, examine for yourselves; you will find in most instances of phthisical manifestation, that the tonsils are either very small or absent. As your space is necessarily confined, I shall briefly enumerate the other prophylactic and remedial agents of which nature avails herself in this disease. They are, bronchocele, tumours pointing to the pharynx, polypi of the nares, or a strumous thickened state of their lining membrane, contractions of the great air-passage, whether functional or structural, aneurism of the aorta, disorder of the heart from whatever cause, hysteria, pregnancy, obstruction of the liver, and in short, whatever obstructs free expiration. More might be detailed, but let these suffice.

The controlling influence of cardiac affections over phthisis is well marked, and highly illustrative of my position. These cases are every day to be met with; so long as the affection of the heart is in the ascendant, the phthisical manifestation is kept in abeyance; a lesser evil substituted for a greater.

In phthisis, the lungs are not fully inflated, and the parietes of the chest undergo gradual contraction. The normal relation between the powers of inspiration and expiration is lost. The great air-passage is proportionally too wide for the diminished volume of the lungs. Whatever restores the wholesome relation between the lungs and the windpipe, contributes to arrest the march of tubercular disease. If this be applied to the various diseases mentioned above, it will enable us, without difficulty, to account for their extraordinary effects. For instance, let us begin with catarrh. Here tumefaction of the mucous membrane preventing the free egress of the air, imprisons it in the air-cells, and produces a *quasi* emphysematous state of the lungs, expanding their entire volume to a certain degree, and pushing out-

wards in every direction the walls of the chest. Again, asthma acts in the same way. The membranous portion of the trachea being spasmodically contracted, confines the air within the lungs and fills up every available cell. The lungs, I may here incidentally observe, are not at all times equally or perfectly expanded, a fact of course well known; every permeable cell in asthma is filled with air. In the same way, tumours, external or internal, contracting the circumference of the air-passages, such as preternatural tonsillary development, polypi in the nares, bronchocele, &c., must necessarily act. Tumours at the root of the lungs will do the same. In any disease of the central organ of circulation, venous congestion takes place in the mucous membrane that lines the bronchial ramifications, and consequent tumefaction. The anatomist will at once understand the circle of changes by which this is brought about. This will be found a very curious and interesting question, and the effect of investigating it, I have no doubt, will be the same on other minds as on my own, viz., conviction of the truth of these views.

Taking for granted that what I have stated is really the case, I would here observe how economical and admirable is the use which nature makes of her resources. She establishes her outworks in the nares, the fauces, and the pharynx; draws her parallels in the larynx and trachea, and when destitute of materials on these lines of defence, falls back on the capital, and often contends for life in its citadel—the heart. The continental writers have done much to elucidate this subject, but singularly enough never seem to have put the question to themselves, how it is, that the cicatrizations denoting the existence of old cavities and the dormancy of tuberculous matter were brought about. Any one who peruses Laennec attentively will perceive that he frequently approached the discovery but uniformly stopped short. It lay so obviously in his way that I greatly wonder he did not stumble upon it as a matter of necessity. The expansion of the lungs brings the walls of a cavity into contact, and thus effects union, as it were, by the first intention. The healthy well-developed action renders old tubercles inert, and prevents the deposition of fresh tuberculous matter.

I now beg to turn your attention to the treatment of consumption. The despondency with which it has so long been regarded has induced medical men to confine themselves to a merely palliative course; I sincerely hope they will soon unlearn this pernicious prejudice. Nature does much for phthisical patients, and art can render her most essential assistance.

Having long observed the manner in which nature effected a cure, certain expedients were adopted in accordance with her principle. That which was found the most convenient and successful was the inhalation of common atmospheric air through a tube, which, while it admits the air freely, presents a slight obstruction to its egress. The full inflation of the lungs is hereby secured. The chest becomes by degrees expanded, and the healthy relation between the lungs and the windpipe restored. The mode of using this tube, though apparently simple, is at first little understood, and hence many persons take it up, and deriving no benefit, lay it aside as useless. The manner in which inhalation operates is similar to that described under the head of catarrh. It possesses, however, this important advantage, that what nature merely attempts, or imperfectly accomplishes, is hereby effected more surely, and without superinducing any new disease. I have never known an instance of bad effects, or even inconvenience, resulting from the use of the inhaling tube. As to medicated vapours, they have obtained favour with certain practitioners, but I confess I look on them as either useless or injurious. The action of the tube which is recommended is mechanical. As a proof of the beneficial effects of this instrument, I shall hereafter present you with a few well-authenticated cases of parties moving in the respectable spheres of society.

I consider the use of the inhaling tube as essential in the treatment of phthisis; indeed, all other treatment is comparatively secondary and auxiliary. It possesses, at all events, the negative re-

commendations of simplicity and safety. It may be advantageously resorted to in cases of asthma as well as phthisis. In asthma the windpipe is too small for the volume of the lungs, and though it may seem contradictory, this mechanical respiration has the effect of restoring the disturbed relation to its healthy equilibrium. The objection to it, on the score that asthma is liable to be superinduced by its use, arises from vague prejudice. Could I but present one-tenth part of the cases which have been rescued from a premature grave, chiefly in consequence of the use of this adventitious respirator, I should force irresistible conviction on the most incredulous, or at least induce them to institute a series of experiments, patiently and judiciously, so as to satisfy themselves of its value.

Let it not be supposed that while such confidence is placed in this instrument there is neglect of the constitutional treatment, or that it is indiscriminately used. The judicious application of leeches over the parts affected, and at proper intervals, vesication, tonic and sedative medicines, &c., &c., constitute an important part of the treatment, and afford ample scope for the nicest discrimination. When symptoms of inflammatory action in the chest present themselves, the mechanical respiration is contra-indicated. The possibility of its abuse or misapplication, together with the necessity of subsidiary general treatment, point out the propriety of medical superintendence.

This mode of treatment has many advocates both in England and abroad. Lebeau, physician to the King of the Belgians, and senior surgeon of the Military Hospital at Brussels, as also Hohnbaum, physician to the Duke of Saxe-Meiningen, and a distinguished pathologist, highly approve of it. Among the American physicians might be mentioned the names of Drs. Fitch, Newton, and Hall, of Philadelphia, who are its zealous supporters. In London, and the provinces, it is coming gradually and progressively into use. Many of its friends have been fellow-pupils, with myself, of the senior physician to the Infirmary for Diseases of the Chest, in Artillery Street, Bishopsgate Street, and to whose lectures and practice founded on more than twenty years experience, we are indebted for the views I have, I fear imperfectly, attempted to describe.

I am aware that much remains to be detailed, and shall be happy at all times, through the medium of your columns, or in any other legitimate way, to meet argument or afford explanation on the subject. A practice that courts the severest scrutiny, and promises such beneficial results, may fairly assume some pretensions to the unbiassed attention of those most interested in its fallacy or its truth.

PHILANTHROPOS.

MEDICO-EDUCATIONAL REFORM.

LETTER II.

To the Medical Professors and Lecturers of England, Scotland, and Ireland.

GENTLEMEN,—I may not, for obvious reasons, conjecture with what feelings generally you received my last communication on the subject of Medico-educational Reform, or what opinions you may have individually formed in regard to the propriety of my undertaking the delicate task of addressing and directing you in the discharge of your duties as teachers of medicine; but when I mentioned that my reason for intrusion was solely for the benefit and interest of medical students, I was convinced that it would be received in the same spirit in which it was written, and that the hints therein given would be acted on in so far as they might agree with your opinions, as to the best mode by which this important class of society was to be benefited. Believing and resting on this assurance, I am induced again to lay before you a few observations on a subject closely connected with, if not forming a component part of, medical education, which has hitherto received but little attention, either in the way of revisal or improvement. I refer to the present system of granting licences before a candidate is entitled to a di-

ploma of any college, so as legally to qualify him to practise the medical art. It is unnecessary to inform you, I presume, that the usual practice in conducting this matter is:—1. That the candidate should submit himself for examination to a Board of Examinators. 2. That the subjects of which he is expected to have a thorough knowledge are, the Latin Classics, Anatomy, Physiology, Surgery, Practice of Medicine, Chemistry, Materia Medica, Midwifery, and, in some cases, Botany. 3. That the period of *one hour* is the general time allotted for this examination on these important and intricate subjects; and lastly, if the candidate answer in a satisfactory manner the various interrogations, he is immediately dubbed with the title of surgeon, and poekets a certificate to that effect, which qualifies him to practise medicine in all its branches. Now, setting aside for a moment the question, as to whether this space of time be sufficient to obtain distinct information in regard to the student's knowledge of the subjects above referred to, it is submitted, that this system, as at present carried on in the majority of the colleges, is in itself manifestly and intrinsically unjust; *first*, because it places those students, whose attainments are of a high order, on a level with, if not lower than those who can boast of possessing no attainments at all; *secondly*, that this last mentioned and numerous class, from this system of examining, and from the circumstance, that they generally, about six weeks prior to the day of their appearance before the Board, apply to what is technically called a "grinder," by whose assistance they obtain a very superficial knowledge of the most popular subjects of examination generally, are enabled, what with brazen-facedness and consummate assurance, to come off victorious over their more modest brethren, whose knowledge and abilities cannot be questioned. A different state of matters would be exposed if sufficient time were allowed to fathom the depth of the information of both parties; but this is not the case: and what are the results? Why the profession abounds with those who are its very bane—individuals who are in every sense part and parcel of that pest and scourge of society—*legalised quacks*, who are blindly following on a road, whose termination must eventually lead to disgrace and destruction. But it is needless to animadvert further on this subject. The facts are too notorious to require proof; and it is to be hoped, that this public notice of them will lead to their speedy rectification. It is also, I should think, unnecessary for me to go into a detail of evidence to prove, that one short hour is far from being sufficient for this ordeal. Its objects are too important to be thus cursorily passed over; and until this time is lengthened, or a totally different method adopted so as to ensure the express intention for which this system was at first instituted, we can never hope to see our profession brought to that advancement which, otherwise, it most unquestionably deserves.

I would beg humbly to submit to your consideration a plan by which all these harassing grievances might be obviated, and which could not fail of complete success, if properly applied and carried out. I would propose to form, in addition to the Board already existing, a certain number of, what might be termed, assistant boards, whose duties would consist in a series of examinations after the termination of each session. For example, a student during a session attends Surgery, Materia Medica, and Practice of Medicine, and at its conclusion I should recommend, that he should be examined on these three subjects—taking one hour for each, and allowing a certain interval of days to elapse between the three examinations; and the same with the other subjects of the remaining sessions; and, that when the candidate thus examined should appear for his final examination, he should be taken upon all the subjects together, generally and practically, for at least the space of three hours. If he had done his duty towards the annual examinations, he would find no difficulty in concentrating all his powers and energies for a short time on the various subjects of examination. This at least would be one very great objection obviated, for no one can rationally expect that any one, be his powers of mind soever strong, can really do justice to all the important

subjects which the present system necessarily imposes upon his attention and assiduity. The practice of "*getting up*" is too frequently a mere temporary exertion of the memory on the tablets of which it leaves no permanent impression; and it cannot therefore be expected to serve a useful purpose in the future labours of the practitioner.

I have thus, gentlemen, endeavoured to sketch the outlines of a plan from which much benefit could be obtained, both as regards the profession itself and its members. However, I am well aware, that it is a very easy task for one to sit down and point out errors and grievances in almost any system, and to propose ways and means by which these may be counteracted or avoided; but that it is another thing altogether, to introduce these remedies amongst a body of men whose labours are extended over the three kingdoms. Rome was not built in a day, neither can we with reason expect, that such changes, in a system which has been in operation for centuries, could take place universally in a given time; but, though we cannot look for such a speedy accomplishment of our ardent wishes, yet we may reasonably be allowed to expect a *commencement* of some reformation in such a melancholy state of matters as that which we have endeavoured to point out. The means of palliation, if not of absolute cure, are plain, easy, and, I should hope, within your reach;—the work once begun would no doubt go on and prosper; and there are those who would most gladly lend their assistance in such a labour, and would only stay their exertions when the whole was completed. Example is alone wanting—it is to you we look for it, and, it is to be hoped, we shall neither look or plead in vain. It is an every day conversation, that there is no science, such as medicine, in which there is such a vast field for profitable labour, enterprise, and improvement, and yet it is constantly sounded into our ears, that there is none so backward in taking advantage of these opportunities. True, much has been done—much is doing, but a far greater portion remains yet to be done, ere we may rest from our labours; and the sooner this work is begun, the sooner will be that stigma of ignoble inaction removed from us. Our resources are great—our powers are unlimited, if we would only draw upon them. Most assuredly this state of matters will not long remain—show the example who may; and we would urge upon you—*you*, the Medical Professors and Lecturers of England, Scotland, and Ireland, for the sake of your well-earned reputations, that ye be the first to lead the van in this glorious regeneration.—I am, gentlemen, your very obedient servant,

THETA.

Edinburgh, 20th Aug. 1842.

THE NEW PHRENOLOGICAL ASSOCIATION.

To the Editor of the 'Medical Times.'

SIR,—A paragraph with the above heading in your last week's paper, shows only too decidedly, how marked is the division of opinion among Phrenologists. I became a member of the Association during the Session of 1842, and I must own, that I felt surprise and regret at the unphilosophical and undignified remarks I then heard made by many esteemed Phrenologists, on the subjects of Mesmerism and Spiritualism. I wish at present only to allude to the second of these subjects; for, while from the discussions at the Association and the communications which have subsequently been made to your journal, I cannot help presuming that no member has seceded from the Phrenological Association owing to the consideration it bestowed upon the extraordinary phenomena of Mesmero-phrenology; the same causes lead me to consider the secession as purely one of persons advocating Spiritualism, from persons advocating so-called material doctrines. I find Dr. Moore's name among those of the seceders. Now, Dr. Moore stated to the Association, that he was Gall's first English pupil. I am desirous then of submitting, through your journal, to Dr. Moore, as well as to the other seceders and cerebral physiologists generally, the following passage from Gall's *Fonctions du Cerveau*, vol. i., pp. 189-90, 8vo.

edition; it will be found to form a marked contrast to the proceedings of many members of the Association.

"When I say that the exercise of our moral and intellectual faculties depends upon material conditions, I do not mean that they are a *product* of organization; this would be to confound conditions with efficient causes. (1.) *I keep myself to what can be submitted to observation.* Thus, I only consider our moral and intellectual faculties, in so far as they become phenomena for us, by means of cerebral organs. (2.) *The physiologist should never venture beyond the material world, nor should he ever deny or affirm anything but what may be judged of by experience.* He should not direct his inquiries to a spiritual substance alone, nor to an animate body alone; his subject is living man, the result of a vegetable life, and of an animal life; consequently he should abstain from entering upon such metaphysical questions as these. What is the nature and essence of the faculties? (3.) *Are they the attributes of a spiritual substance, or the properties of organised matter?* In one word, he should not endeavour to explain the union of soul and body, nor their reciprocal influence, nor how this influence is exerted, whether by the immediate action of God, or by means of an ethereal fluid, or a divine emanation. Whether souls are united to bodies earlier or later; whether they are endowed with qualities differing for each individual, or perfectly similar in all; whatever may be, on this point, the decision of theologians and metaphysicians, (4.) *my principles, that the manifestation of our moral and intellectual faculties is only possible by means of organisation, cannot be shaken.*"

The opening address of Dr. Engledue (MEDICAL TIMES, No. 145, pp. 209, *et seq.*) had, I feel sure, for its object the inoculation of the principles explained in the above paragraph, especially in the passages numbered 1, 2, and 4. Unfortunately he neglected the admonition of Gall, and hazarded an opinion upon the question numbered 3. When taxed with having said that "the brain was mind," he rejected the absurdity in these words: "we assert that there is no such thing as mind, and that there is such a thing as brain," (see also Address, p. 210.) It is much to be regretted that in his anxiety to combat spiritualism, which he conceived to "fetter and tie down physiological investigation" (*supra*, p. 210,) he should have fallen into the opposite error of calling our faculties (in the words of Gall) "the properties of organised matter," (*ibid.*) and of asserting—and it is only an assertion, as incapable of proof as the assertion he combated—that "mind has no existence." Mr. Tulk had just as much reason on his side in propounding Bishop Berkeley's theory that "there was no other thing but mind." Would that the cerebral physiologists of the present day, would, like their great leader, abide by the decision, "to keep themselves to what can be submitted to observation." Dr. Engledue's proposition modified as follows, "We contend that there are no proofs, which can be submitted to observation, of the existence of such a thing as mind," would be admitted by most parties—by all philosophers. But we cannot deny the existence of a thing which does not by its action necessarily contradict known phenomena. And the mind of the schools—at any rate of the modern Phrenological Schools—does not, by its action, contradict any known phenomena, for it accommodates itself to every organic restriction which observation discovers. Yet we should not use words which imply theories. *Cerebration*, simply implying the manifestations consequent on certain material conditions, viz., the existence of a particular piece of organism termed the cerebrum, seems a very unobjectionable word to substitute for mind. And Cerebral Physiology is the right name for the science which Dr. Spurzheim termed Phrenology; a word which implies a theory at the best, (viz., the existence of mind as a separate identity, and the study of its nature independent of cerebral physiology,) and is really derived from one of the most thoroughly rejected errors of the ancients, one which considered the seat of the mind to be the diaphragm.

Hoping that these remarks may tend to show that cerebral physiologists are not divided upon any real doctrine of their science, but simply upon

some metaphysical questions, the resolution of which can have no effect, good or bad, upon that science, and that the persons who term themselves philosophers will no longer allow themselves to be led away by such unphilosophical feelings—philosophy should exclude all feeling and cling to its own home, intellect—I beg to apologise for the length of my communication, and remain, your obedient servant,

ALEXANDER JOHN ELLIS.

Broadstairs, August 22, 1842.

ON THE PHYSIOLOGY OF THE SPLEEN.

By GEORGE SAYLE.

DR. HAIGHTON supposed that the distended stomach presses on the spleen (finding it diminished in size during a meal), and so determined an increase of blood to the stomach, liver, and pancreas during digestion. Sir E. Home inferred from his experiments, that the spleen was a series of blood-vessels and absorbents without any connecting cellular investment, and supposed from this that the *interstices of the vessels* was a reservoir for the increased serum, lymph, globules, colouring matter, &c., carried into the circulation as soon as the digestive process is completed. Sir Astley Cooper supposed the spleen an elastic reservoir and manufactory of venous blood. Mr. Hewson imagined it to be the manufactory of the red globules of the blood. Sir Anthony Carlisle regards "the compensating heat of the spleen" to be the natural provision against the *torporising* influence of low temperature, suddenly applied to the nervous and muscular structures of the stomach. Sir Chas. Bell was of opinion that the spleen was a provision for giving the vessels of the stomach an occasional power and greater activity, enabling them to pour out a quantity of fluid according to the necessity of digestion; and also considered the venous blood of the spleen an auxiliary to the functions of the liver. Mr. Dobson advanced the idea, "that the primary use of the spleen is to serve as a reservoir to receive the surplus of blood which is contained in the system after digestion;" and also supposes it a "regulation of the circulation in various states of disturbance." Professor Müller says, "we are quite ignorant of the office of the spleen, we merely know that its importance in the economy is not great; the experiments of numerous observers have shown that it may be extirpated without any remarkable ill consequence." Dupuytren observed increased voracity in dogs after its removal; and Mead and Mayer noticed signs of imperfect digestion. Mr. Carpenter, of Bristol, says, "the theory of the operation of the spleen most satisfactory to the author, is that which regards it as a sort of diverticulum or reservoir, which may serve to relieve the portal venous system from undue distention, under a great variety of circumstances;" and further states, that as the portal system is destitute of valves, the spleen will readily receive the venous blood, when the secreting action of the liver is impaired. Cruveilhier writes, "the functions of the spleen appear to me to be referable to its structure and vascular connections. The quantity of blood which passes through it, its entirely vascular structure, and the physical qualities of the splenic pulp prove, that the blood, on the one hand, serves other purposes besides that of nutrition; and, on the other, that it undergoes some important changes, of which we are completely ignorant, because the means of analysis are wanting; but whatever they may be, they have undoubtedly some connection with the liver, for in all animals possessing a spleen, even though its arterial blood does not come to it from the same trunk as the hepatic artery,

the veins of the spleen terminate in the venous system of the liver."

These form the major part of the theories and opinions on the functions of the spleen; though some others have been adduced, they are not deemed of sufficient note to relate them. Of its structure, also, many opinions have been given; but on this point anatomists are now quite settled, and agree with Cruveilhier, "that the basis of the spleen is composed of a fibrous structure, consisting of an investing fibrous membrane, of fibrous sheaths which accompany the vessels in their divisions and subdivisions. The internal frame-work of the spleen is, therefore, an areolar tissue, which may be very well displayed by washing away the pulpy matter of this viscus by means of a stream of water."

I believe now the opinions first mentioned are at present only enumerated in describing this organ to elucidate the differences in opinion which have arisen at various times. The first of them, in my opinion, approaching nearer the truth, is that of Sir Chas. Bell, but only that part of his theory which supposed the venous blood of the spleen an auxiliary to the functions of the liver.

Mr. Dobson is carried out, in his opinion, by actual experiments, the use he attributes to the spleen; but I fear very little faith can be placed on these experiments, and supposing it to be as he actually states, a reservoir for the newly-formed blood, in what manner, and by what law is it placed there, as the principles of the blood are carried by the thoracic duct not into the *portal*, but the *general* circulation?

Müller says he cannot attribute much importance to the fact of its removal producing no constitutional disturbance; this, I suppose, arises from the experiments being performed on dogs, who eat only at stated periods, and during each interspace sufficient bile will have been collected in the gall-bladder to supply the calls of nature, formed by the mesenteric and hæmorrhoidal veins. The veracity of this statement might easily be proved by removing the spleen of an animal without a gall-bladder; an experiment which I thought would answer the same end, was first to tie the ductus cysticus and then pass a ligature round the splenic artery; which, however, after many vain attempts, I was compelled to relinquish.

Mead and Mayer noticed signs of imperfect digestion, and there can exist no doubt, that the flow of bile must be considerably diminished, by at once removing half the origin of supply of the portal circulation, and which, supposing the existence of bile necessary for the formation of chyle, it will readily account for the symptoms enumerated by those physiologists. With regard to Mr. Carpenter's idea, I would ask if such great importance belongs to the spleen as he attributes, would it be possible for the animal to exist without it? and this also equally applies to Mr. Dobson's hypothesis; and if the spleen receives the newly-formed blood, what, I would ask, performs its office after the removal of the body?

Cruveilhier approaches nearest to my ideas when he says, the functions ought to be referred to its structure and vascular connections, and which, when well weighed, will I think lead to more satisfactory conclusions; for was it, as Mr. Carpenter supposes, a venous reservoir, why should we have an artery of so large a size entering it—an artery, which in comparison with the organ which it supplies, is the largest in the body? Surely something then must be intended from this design.

Carrying out its vascular connections, we find in every instance the arteries supplying the stomach and first portion of the intestine always connected with that of the spleen while it may or may not be with those of

liver, and in the same way also supplied by nerves from the one common source; hence, a communication between the two is constantly kept up, and by their nervous supply they are called upon to act as nature has ordained. That there is a constant flow of blood through the spleen all admit, which is greatly increased after the food taken into the stomach has undergone chymification: is it not, then, by virtue of a vital turgescence, similar to that of the penis, that the spleen admits of a greater flow of arterial blood, and so in proportion returns a larger quantity of venous into that circulation from whence the bile is derived, an increase of which being called for to perform the function of *chylification*, and which can be removed from the body without much injury to the animal economy, only in those that take food at stated periods, in which the mesenteric and inferior hæmorrhoidal veins would have sufficient time to circulate a given quantity of venous blood for the bile required after the formation of which to be placed in the gall-bladder ready to answer the calls of nature whenever it is demanded. This supposition is much strengthened by the experiments of Dobson, who found those veins which I last mentioned filled to a great extent, at the death of the dogs which had undergone his experiments; and, again in his first experiment, he gave the animal a large quantity to eat, which became in four hours very uneasy, and sunk into a torpid state, pupils dilated, heart labouring, &c.; he supposes it to have arisen from over-fulness of the vascular system or plethora; but might it not arise from the bile formed by the mesenteric and hæmorrhoidal veins being insufficient to supply the demand required? because, in his second experiment, when the animal was fed often and little given, no such effect was produced, and as I opine by sufficient bile being produced by the channel named.

TO CORRESPONDENTS.

If "An Aggrieved Practitioner," who complains that an unqualified pretender to medicine, in Brentford, has been appointed Commissioner under the "Property Tax Law," and will so have an opportunity of peeping into the returns made by the regularly qualified gentleman of his district, will give his name, we will publish his letter.

Medical Gazette.—We are called upon to retract the observations which we have more than once made on Dr. McLeod in discharging our duty in reference to the inane pomposity, the threadbare respectability, and sycophantic unprincipledness which form the stock in trade of the ever-tiring, but untired editor of the "Medical Gazette." We now learn, from the best authority, that Dr. McLeod has no share in that Journal's equivocal responsibilities, which rest wholly and entirely on Mr. Paget, a young gentleman, filling with great gentility some inferior situation in St. Bartholomew's Hospital. We comply with this request with great pleasure, and sincerely beg Dr. McLeod to accept our most marked apology for the misunderstanding which thus misled us to do him the worst injury we could well inflict on any gentleman claiming an acquaintance with science or literature.

Dr. Drought is assured that the fault lies not at our office. We are extremely punctual as to time, and careful as to manner. The fault is with the Irish Post Office.

We have received contributions by Novus Homo on Reform, Dr. Clay on Seale Cornutum, Mr. Nottingham on Parisian Hospital Cases, Mr. Horne on Mesmerism, Mr. J. H. Smith, Edinburgh, on Palsy.

An Admirer will find what he wants in this number.

A Novice is requested to wait till we publish our sessional synopsis and review of the various schools.

We have been obliged to decline several communications: they lie at the office for the writers.

* * * Our Subscribers are informed, that the rule is to pay in advance. There are several subscriptions which (expected for some time) have not yet reached us.

TO STUDENTS — THEIR PARENTS OR GUARDIANS, AND TO OUR MEDICAL FRIENDS.

WE earnestly solicit from our friends and the public, that all influence may be used to prevent entries at any of the London Schools, until after we have given our annual review of the proposed lecturers and courses. Our determination is fixed, that there shall not be incompetent teachers, or incomplete instruction, without our making the facts known; the readers of our Journal at least shall not ignorantly lose their money by false pretences. If we are to have nepotism in our hospitals and schools, we are resolved, as far as our power goes, to have it relieved, if not redeemed—by cleverness or industry. Last year we especially called attention to the defects of the young and previously unknown gentlemen, who clubbed together to open a school of medicine, which, forsooth, they called the Hunterian: six months afterwards—the interval being marked by a loss of money, uncompensated by any increase of reputation—the school ceased to exist. Let us have similar cause this year; and it will be no fault of ours if we do not have similar results. Let incompetent lecturers, therefore, thus timely warned, BEWARE: the time and money of the future race of practitioners—our successors—are sacred—and without applying a lash we will not see them absorbed by mediocrity—especially when talent is in the field—

— Mediocribus esse Lectoribus,
Non Concessere columnæ (nostræ) non homines, non Dii.

THE MEDICAL TIMES.

SATURDAY, AUGUST 27, 1842.

Whence, and what art thou, execrable shape,
That darest, though grim and horrible, advance
Thy miscreated front athwart my way
To yonder gates? MILTON.

THE banditti of the present day, though not a whit less successful than their less adroit brethren of former times, neither pass their days on the highways nor end them on the scaffold. They form in a band, say of twenty-one, get an act furtively through the Legislature which makes them a corporate body, with the power of framing bye-laws investing them with complete power over the monies, chattels, bodies, prospects of some ten or twelve thousand of the moderately affluent but not overpowerful part of the community, and manage (with a happy mixture of the bullying hardihood of a Turpin and the slinking slyness of a Jonathan Wild) to extract from their helpless victims, under one pretence of public good or another, some ten or twelve thousands a year—the moiety of which, under some other equally good-looking pretence, they as cleverly manage to transfer to their own pockets, with a due regard

to the seniority of each respective brother in the troop. The banditti of to-day are a favoured set—their business, like that of their predecessors, is too lucrative to allow of promiscuous admission to mere daring dishonesty; it has been made a family heritage, as difficult of entrance as the troop of forty known to Ali Baba: their labours are lighter, their plunder greater, their chance of punishment infinitely less, their highway being but a closed Council Chamber, their pistol but a harmless bye-law, their demand but the *legal one*—"your money or your character," their lowest booty twenty guineas!

But, alas, the ablest, the most systematic, the nicest, finest, fairest, *justest* scheme of plunder can't be eternal, and "The voice of time, disparting towers" which told of the finished reign and perished personalities of civic oligarchies in every borough and city of the empire, which spoke of the end of those self-electing, self-governing corporations—the "West Middlesex Assurance Society" and the "Joint-Stock Loan Investment Society and Savings' Bank," came with ominous warnings on the ears of the last surviving and more fortunate corporators of Lincoln's-inn-fields. To stave off their threatened doom, and to arrest the march of quick coming improvement, was a task that called for all their ingenuity; and they have bethought themselves of a plan which, while presenting their house to the public in something like decent order, and even sacrificing partially the *certain* succession of their sons and nephews to the same plenitude of the profession's money and distinctions, will ensure themselves (if allowed to be successful) the enjoyment of all their old buccaneering privileges and pecuniary results for the remainder of their lives! This is no boyish figure of speech, no idle essay of imagination; the extra private meetings of the Court of Examiners, the numerous meetings of the Council during the last six months, have had scarcely any other object but this.

Their arrangement for continuing themselves in office to a ripe, a very ripe old age, and provision for their retirement on no disagreeable pecuniary allowance, are bolstered up by a plan of apparent liberality, which though it may win them the support of a certain number of the present excluded, is little less, when calmly considered, than a deep and stinging insult to the great body of our profession. The general practitioners of the empire, who to the rest of the profession are as twenty thousand to four or five hundred, in whose hands is the principal care of the health of the empire, have been claiming for years some recognition of their existence in the medical commonwealth.—Forming in truth, as Sir J. Clark, the Queen's Physician, very properly told the Home Secretary of State, THE PROFESSION, the amelioration of their condition, their advancement to a fair share of the privileges and powers connected with their government was the

essential and fundamental point—the question of questions in all our past years' agitation for Medical Reform: yet how have the twenty-one of Lincoln's-inn-fields acted, the gentlemen who are so anxious to do complete justice to their medical brethren, who have no thought save of public good in their retention of office, and who recently yielded Mr. Guthrie the pure satisfaction of feeling, on his retirement from office, that no abuse in the College remained uncorrected? While pretending to sanction the cry for reform, they have arranged—if their conspiracy shall succeed—not only for the utter and perpetual exclusion of the whole body of general practitioners, but for their degradation to that lower rank which must arise from the interposition between them and the Council of an intermediate grade, composed of about two hundred and fifty *pure* surgeons, who are to be protected from contamination with the abased practitioners and to be honoured and looked up to by them as *Fellows*! The segregation must be flattering to our brethren, and offers them a magnificent result for all their past years labours and anticipations! This scheme was submitted at the beginning of last Session to Sir James Graham, and not unfavourably received: the remonstrances of the profession, however—among which our voice was neither unheard nor unheeded,—placed a new prospect before the Home Secretary's vision, whence we are indebted for the Council's unsatisfactory, nay, vexatious interview with him last month, and the postponement of a practical measure till next February. The twenty-one have prudently, in consequence, allowed the question to slumber, but only for a time. In six months it will again be awakened, with what results it will be for the profession, by their activity or apathy, to decide.

But whence derived we these facts? We will be frank, and give them the stamp of authenticity, which is their due. We derived them from a rather recent member of the Council, whose *blabbing-tongued* propensities Nature distinctly labelled in naming him. We have learned them from him, *with more*; and under no tie of confidence on his part or bond of secrecy on ours. HE is our authority, and making every allowance for the laxity of principle which naturally arises from the tightness of the asceticism or looseness of the honour which it is his pleasure or interest to indulge—he yet will not dare to deny it; at all events, he *cannot* deny it but with a blush. While thus handing him over, however, to the execution of his betrayed brother pals, with the injunction "*Percontatorem fugito, &c.*," let the circumstance not be forgotten by our readers, that whatever betide him from their indignation, we have his repeated *blabbings* as authority for our statement. They may be *certain* of the facts, and with such a certainty staring us in the face, we are tempted to ask, is there such a thing as an independent and high-spirited medical profes-

sion in this country? Is it capable of indignation under wrong and contumely? Has it a voice, or dare it make it known? If so, the observations we have made will not be without effect—they will not fall on barren ground!

EXTRACTS FROM FOREIGN JOURNALS.

(For the 'Medical Times.')

On the absolute independence of the foetal circulation on that of the mother. By Dr. Villeneuve, of Marseilles. — M. Villeneuve commences this memoir by stating, that although some instances are recorded of infants being born pallid and exanguious as the result of labours complicated with hæmorrhage, from an abnormal insertion of the placenta, there are many other authenticated cases (two or three of which he relates) in which infants have under similar circumstances been born with evident signs of plethora. These facts prove in a direct manner that the vessels, which sometimes allow an escape of blood sufficient to prove mortal, can have no communication with those of a foetus which is born plethoric. But can such a connexion exist where the infant is born in a pallid or exanguious condition? M. V. asserts not. Notwithstanding, he says, the respectability of the authorities who have advocated the communication of the maternal circulation with that of the foetus, there have been great diversities of opinion on this point. Some, as Hunter, Mauriceau, Peu, &c., assert that this communication takes place between the two circulations by way of anastomosis; others, as Astruc, Burton, and Blumenbach, consider the blood to flow from the uterine into the placental sinuses, whence it is absorbed by the radicles of the umbilical vein. What are the proofs brought forward in favour of this opinion? That the foetus may be born exanguious from free uterine hæmorrhage; that hæmorrhage may take place from the placental end of the cord; that the odour of camphor as well as the colour of madder have been found in the foetus whose mother had taken those substances; lastly, that a foetus may be poisoned by opium taken by the mother. The first of these facts M. V. thinks sufficiently answered by the instances already mentioned of plethoric infants born of women who have died of anæmia. Wisberg also speaks of similar cases. Méry likewise, in 1708, showed the Academy of Sciences a bitch who died of hæmorrhage, but in whom the young were found alive half an hour afterwards, without having lost a drop of blood. *Hæmorrhage from the placental end of the cord*, if it ever does exist, may, he considers arise from the ramifications of the umbilical vein being over distended with blood; but that the loss of blood generally takes place from the placenta becoming separated from the uterine parietes.

Action upon the foetus of substances introduced into the mother.—This phenomenon he thinks may be sufficiently explained by means of absorption, imbibition, or endosmosis. Recurring then to the opposite side of the question, he thinks that the independence of the foetal circulation is supported by the laws of physiology as well as by comparative anatomy, and lastly by the result of artificial injection. 1st. There exists an elementary circulation in the embryo before the establishment of the utero-placental circulation. 2nd. Oviparous animals clearly prove that the young may be developed without the influence of the mother, and that there is formed an extra-foetal circulatory apparatus influenced by the air which traverses the porosities of the shell. 3rd. The

apoplectic state of a foetus born of a mother dying of hæmorrhage cannot be accounted for if we admit an anastomosis of circulation between the mother and child. 4th. Lastly, the result of injections made after death is clearly in favour of the independence of the two circulations. Thus, Professor Mende, of Gottingen, relates the case of a woman in whom he injected the placenta by the uterine artery with milk, and the umbilical vessels with a weak solution of gum coloured red. The results of his experiment convinced him that there is no immediate anastomosis between the blood-vessels of the mother and the child; that the blood of the mother arrives by the uterine artery in the sinuses of the placenta, where it bathes the ultimate ramifications of the umbilical vessels, precisely at that part where the arterial capillaries merge into those of the veins. The minute ramusculi of the uterine vein, which are also prolonged into these sinuses, appear to carry the blood back to the mother. Drs. Holland and Ley, in England, as well as Messrs. Stanley and Herbert Mayo, seem to have arrived at a similar conclusion. Lastly, M. Bonami, having incised the uterus, injected linseed-oil coloured with the carbonate of lead into the umbilical vein, and some of the same oil mixed with yellow ochre into the umbilical artery. The utero-placental arteries were discovered running in great numbers towards the centre of the placenta (the most excentric of these being about 2 centimetres in circumference, and from a half to 2 millimetres in diameter); they were of a spiral form, having an oblique passage, and were continuous with the uterine arteries, presenting few ramifications, and anastomosing but rarely one with another. The veins were rather larger, rectilinear, having numerous ramifications and very frequent anastomoses, and terminated in the large uterine veins. The umbilical arteries communicated freely one with another, as also with the veins. The injection being thrown into the umbilical vein passed with difficulty into the arteries. The uterine surface of the placenta when thoroughly injected gave no issue to the fluid. There was no communication between the maternal and the foetal vessels. Among the greatest partisans of the direct circulation between the mother and infant, we must doubtless consider Astruc, who, the better to explain his theory of the utero-foetal anastomotic circulation, had imagined the existence of cœcal veins. "These vessels," says this celebrated author, "are the appendices of the veins, which are scarcely perceptible but in pregnant women and during the last months of gestation; then, however, we find them jutting out from the womb into the placenta, and so assisting to connect these two bodies together, as also by their *open* extremities to turn the blood from the mother into the cells of the placenta, whence it is carried off by the branches of the umbilical vein into the circulatory system of the foetus." And again: "The mother furnishes blood to the foetus from the third month by the cœcal veins, but the infant never returns it to the mother in the natural state, &c." But, says M. Villeneuve, is it not evident that M. Astruc has confounded these vessels with the utero-placental veins, and that he has overlooked the utero-placental arteries and their anastomoses with the veins of the same name? Is it not also palpable that, even admitting the cœcal veins of the mother to carry blood to the foetus after the third month, the foetus presents before that period a distinct circulatory apparatus, and that we must then allow that non-sanguineous fluids absorbed from the mother are converted into blood in the foetus? These M. V. considers to be insuperable objections to this theory. The great Ruysch also declared his conviction of the non-

existence of any communication between the vessels of the womb and the placenta. Joerg, in the present day, has asserted that the placenta imbibes merely oxygen in the womb; that it is the physiological lung of the fœtus, and that the uterine arteries correspond to the bronchi and the trachea. Geoffroy St. Hilaire, in like manner, admits the absorption of air, or at least of a vivifying gas by the vessels of the *fœtus in utero*, which he compares to the pulmonary system of after-life. Now, the total absence of direct communication between the maternal and the fœtal vessels, so thoroughly proved by the admirable injections of Drs. Ley, Holland, and especially those of M. Bonami, implies the positive necessity of admitting the vivifying action of the oxygen of the maternal blood upon that of the fœtus through the delicate parietes of the utero-placental arteries on the side of the mother and the walls of the capillary umbilical arteries, just at the moment of their emptying themselves into the ramifications of the umbilical vein. If other proofs were wanting of the absolute independence of the fœtal circulation over that of the mother, one might mention the marked difference existing between the fœtal and maternal pulsations, 140 strokes in the fœtus to 80 in the mother; the difference of the blood, which, of a rose tint at first, then red, and afterwards blackish, has a similar colour in the arteries and veins, and is less coagulable in the fœtus than in the adult; and lastly, the experiments of Prevost and Dumas, who have proved that the blood-globules of the fœtus are smaller than those of the mother, and that the red globules of the latter are unable to pass into the vessels of the infant. From these considerations he lays down the following propositions:—1st, There is no anastomotic communication between the maternal circulation and that of the fœtus in the human race as in most quadrupeds. 2nd, This absence of communication is proved; first, by the existence of an elementary circulatory apparatus in the embryo before the formation of the placenta; secondly, by the plethoric state of the fœtus in cases of uterine hæmorrhage, where the placenta has undergone no rupture; thirdly, by the continuance, though for a short period, and without placental hæmorrhage, of the placento-fœtal circulation in the ovum when entirely expelled. 3rd, The death of the fœtus is due solely to the want of oxygenation of the blood destined to circulate in its organs. This death may be prevented by hastening the termination of the accouchement, and thus preventing the infant being asphyxiated. It is never owing to anæmia, except when the umbilical vessels of the placenta have been ruptured. 4th, The death of the mother may be caused by the separation of a very small portion of placenta, proving that there is greater danger from venous than from arterial hæmorrhage, inasmuch as the utero-placental veins have numerous anastomoses one with another, as well as with the uterine sinuses, whilst the utero-placental arteries presents none or scarcely any points of communication. 5th, The life of the mother is so much more endangered as the labour is prolonged, as in first labours, or where the placenta is inserted over the uterine orifice, although but a small surface becomes separated. 6th, The life of the infant is so much more exposed as the separation of the placenta is more considerable and more premature, however rapid may be the termination of the accouchement, and *vice versa*. 7th, The ergot of rye is injurious both to mother and infant in these kinds of hæmorrhage: *a*. Because it determines the constriction of the uterus as much, and perhaps more in its inferior than in its superior segment, without provoking the dilatation of the outer orifice; *b*. Because this constriction expresses

from the uterus the little blood which it is requisite that the mother should preserve; *c*. Because the inferior segment of the uterus opposing the passage of the infant, the vessels are kept patulous and continue to throw out blood as long as the presence of the infant maintains the uterus in a state of extreme distension. It is doubly injurious to the child, in the first place, by depriving it of the oxygenated blood of which it has need, and also by suspending its circulation in consequence of a constriction which acts in a permanent manner upon all parts of its body. 8th. The plug is the best mode of treatment, especially in first labours. Its application should not be made too early, nor ought it to be delayed too long. It is more effectual than the ergot of rye in causing normal uterine contractions, so as quickly to dilate the orifice; when applied too late, it becomes ineffectual in stopping the hæmorrhage, since the blood, deprived of its cruer, consists merely of a reddish lymph, which is easily imbibed by the plug. But even then it is not injurious, since it induces the dilatation of the orifice. 9th. The practice of perforating the placenta when inserted over the uterine orifice, and extracting the child through this opening, is one which has long since been justly abandoned. It frequently happens from attempts of this nature, which almost invariably cause the entire separation of the placenta, that this organ is expelled before the child. It is always possible to separate the placenta by the part from which the hæmorrhage takes place and thus to search for the infant. By the opposite mode of proceeding, the death of the child is rendered almost certain from the rupture of the umbilical vessels. 10th. Lastly, we may hope to save the child even after the death of the mother, especially if caused by sudden and frightful hæmorrhage: numerous cases might be cited in support of this proposition. Hence the necessity of practising the Cæsarian operation in all women dying in an advanced stage of pregnancy.

TREATMENT OF BLENNORRHAGIC URETHRITIS BY PLUGGING WITH COTTON.

By M. HOERMANN.

(For the Medical Times.)

THE most important fact relating to this sort of disease is, that contrary to the opinion entertained by practitioners of high standing, urethritis is extremely rare in the female sex, so much so, that from statistical tables in my possession, I find that in 25 cases of blennorrhagic discharge, it was only once that this came from the urethra, which would corroborate what Swediauer said on the same subject:—"Gonorrhœa has this peculiarity in the female, that its seat is not in the urethra;" and again, "I have never seen a female, &c." The first statement is evidently erroneous, but certainly less so than that which is diametrically opposed to it, viz., that urethritis existed eight times in twelve cases, when blennorrhagy had been the result of an impure coitus. Still, I have to state, that I shall not speak here of the inflammation of the canal of the urethra, or of that circumscribed merely around its orifice, which I have seen, on the contrary, always to coincide with vulvitis, especially in those unfortunate children, whose violation could have been accomplished but imperfectly.

Another fact, which, however, is generally recognised, is, that urethritis is in the female isolated and primitive, save in some exceptional cases; it may be acute, which is more common, or chronic. The puriform discharge is in most cases the only sign of an acute inflammation

of the urethra. The redness and the swelling of its orifice, the tension of its parietes, which some have compared to the cord which the urethra represents in the male, is almost always sufficient. Pain seldom occurs; it is remarkable, that females generally do not feel the least burning on passing urine, and those who complain, state that it is outside the urethra that pain is felt. The examination of the parts then proves it to be either vulvitis or vaginitis. The same as in acute urethritis, the puriform discharge is also the sole sign of chronic urethritis. In this case, however, several alterations in texture are observed. The most frequent is the swelling and induration of the *bourette* which surrounds the vulvar orifice of the urethra. The entrance of this canal is at the same time ulcerated, or at least eroded. This erosion is either uniform, or attended by granulations of a variable volume. Under these circumstances, the emission of urine is very painful, so much so that females retain their urine, as I shall state hereafter. Strictures of the urethra, similar to those in man, have been spoken of, but as far as I can say, I have found simply an enlargement of the meatus of the urethra; and the retention of urine just spoken of, was merely caused by pain, and was a voluntary ischuria. The conclusion to be derived from the preceding is, that when there is no puriform discharge, blennorrhagic urethritis is with difficulty ascertained, whether it be chronic or acute.

When the urethra is full of a purulent mucus, a drop of a yellowish white colour appears at the orifice, and the diagnosis is easily made out. But if the female has washed herself, the pus disappears, and the simple appearance of the parts is not sufficient to indicate the state of the urethra. Two expedients are then to be tried:—1st, the inspection of the linen; 2nd, the pressure of the canal against the arch of the pubis.

A first question is, can it be ascertained, by the inspection of the linen, whether the spots are produced by simple leucorrhœa or by virulent blennorrhagy, and secondly, if this distinction be made, can it be decided by the form of these spots, whether they are the effects of urethral or of vulvo-vaginal blennorrhagy?

The first question is answered by the fact, that the spots of common leucorrhœa differ sufficiently from those of urethral blennorrhagy to prevent their being, in general, confounded one with another. The leucorrhagic spots resemble those of new cream; they are of a waxy white, and never obliterate the tissue of the linen. Blennorrhagic spots, on the contrary, resemble boiled cream, they are opaque, of a yellowish-green; and obliterate the tissue of the linen without depriving it of its softness. Whether blennorrhagic spots are derived from the urethra or the vulva, or vagina, is said to be known by the former being exactly round, very small, and disseminated; whilst the latter are large and irregularly diffused. Still, I could never verify the correctness of these observations. 2nd, As to pressure of the urethra against the arch of the pubis, even this expedient may deceive: in fact, if the female has made water shortly before the pus has escaped, the finger will be unable to express anything from the urethra. The experiment must be therefore repeated, and females (whose veracity we have no reason to doubt) be instructed to retain their urine.

The *plugging* of the urethra is next to be dilated upon. My reasons for resorting to it, were the inefficiency of all the remedies hitherto proposed. During eighteen months, I have been able to trace out about twenty cases of either acute or chronic urethritis. At first I employed the usual remedies: cubebæ and copaiba, were first tried; these, administered either internally or by the anus, gave rise to

unpleasant results. The discharge became less, but did not cease till after one month or six weeks. As, however, this is the term of the natural and aperitive mode of cure of the malady, these remedies cannot be considered of any utility. The ten cases which I have lately treated, have been exclusively subjected to the *tamponnement* with carded cotton. The following is my procedure. For the purpose of plugging the urethra, I make use of a canula with which I enter the neck of the bladder. Its introduction, if properly managed, causes no inconvenience. We must be careful not to carry the canula over the vesical orifice, because it becomes then like a *filtrum* which continually attracts the urine, and not only soils the patient's clothes, but even its effect is marred by continuing the contact of the urine with the parietes of the canal, and prolonging its irritation. For the purpose of confining the plug to the urethra, it should not be longer than six lines. Its value ought to be reducible to the thickness of a quill. Another precaution is not to make it reach the bladder, where it might form the nucleus of a calculus. With this view, the thread with which the superior part of the plug is tied, is brought back through the instrument by which it was introduced, and remains hanging outside the vulva. It is by this thread that the patient can remove the plug.

When the *tampon* is first introduced, the patient does not even feel its pressure. A quarter or half an hour afterwards, there are some pains, which diminish, and finally cease after an hour's patience. These pains occasion at times a contraction of the bladder and the necessity for making water, by which the *tampon* also is driven out. The patient is therefore to be advised to retain the urine. At any rate, the bladder is first to be emptied, either spontaneously, or by the catheter, when the above accident will be avoided. These immediate effects of the plugging do not extend beyond the period of treatment, and the urethra does not suffer one moment after the affection is removed. The *tampon* has to remain in the urethra as long as possible, and as females have a peculiar power of retaining their urine, I have had cases where it was kept during eight or ten hours, the duration of the treatment will vary according to the intensity of the discharge, and the state of the membrane whence it comes. But according to my experience, I may say, that fifteen days have sufficed to cure a most abundant and acute blenorhaggy. I can also state that in chronic urethritis, the lesions of texture as well as the discharge are readily modified by the employment of the plug.

CASE OF ENORMOUSLY-DISTENDED GALL-BLADDER.

Communicated by B. G. Babington, M.D., F.R.S.

SAMUEL WOODS, aged 23, admitted into Job's Ward, Jan. 19, 1842; a tall man, with dark hair and eyes; by trade a plumber and glazier; states, that formerly he was of a very stout habit of body, and, with the exception of having had a fistula ten years ago, always enjoyed remarkably good health previously to his present illness. Thirteen months since, he began to suffer from swellings in his lower extremities, accompanied by great pain in his loins. These continued more or less till last April, when he first noticed beneath the margin of the ribs, on the right side, what he calls "a small ball," which, he states, was somewhat moveable, and gave him occasionally great pain; so that in the following month (May) he was compelled to leave off working altogether, partly from

the pain which he suffered, and partly from progressively increasing weakness. Since that time the tumour has been gradually increasing to its present size, he has had an almost constant gnawing pain in his side, and has been rapidly losing flesh and strength.

Present symptoms.—His body is much emaciated; his face is exceedingly pale, waxy, and exsanguine; the conjunctivæ are of a pearly whiteness; the palpebræ dark-coloured. He complains of a gnawing pain in the abdomen, towards the lower part of the tumour. The legs are not oedematous at present, but he states that they become so when he moves about. His bowels are regular. The action of the heart and the respiration are normal. Tongue clean. The right hypochondriac, and parts of the right lumbar, and umbilical regions and of the scrobiculus cordis, are occupied by a large rounded tumour, the surface of which is quite smooth. It is moderately firm, and gives a very perceptible sense of fluctuation on percussion.

The pain augmented after his admission. On the 29th of January, an extremely fine exploring trochar and canula were passed into the tumour. No fluid escaped; but a fine probe introduced through the canula, demonstrated that the tumour was full of fluid, as the probe passed without any obstruction for three or four inches beyond the canula's point. Although no fluid came through the canula, yet, when it was withdrawn, on passing the trochar again through it to clean it, a small plug of thick mucous fluid was forced out, which led to a speculation, whether the tumour might not be an enlargement of bowel, and this portion of thick mucus have proceeded from its lining.

The patient gradually declined. At 4 P.M. of the 11th of February, he complained of great pain over his whole body, which he compared to cramp. At 9 P.M. he expired.

Dissection.—The body was emaciated, and the abdomen greenish. The serous cavities of the thorax seemed quite healthy. The peritoneum contained much muco-purulent secretion, which was evidently ropy, and mostly tinged with blood. About the spleen it was more watery; and above the liver, on the right side, very puriform. At this part, the diaphragm was extended, and thin, and coated (inferiorly) with thick, rugose, soft, adherent fibrin, which also covered parts of the liver. The omentum was contracted into a band resembling a large, pale, soft pancreas, and reaching to the right ilium. A great flaccid cyst adhered feebly but extensively to the anterior walls of the abdomen, and was in great part surrounded by hepatic substance; one acute margin of the liver being near the right iliac fossa. All the liver, to the left of the round ligament, was unaltered in structure; but it was thrust too much to the left. Much of the obtuse edge retained its form and place; but the remaining portion was pale and coarse in texture.

The cyst above-mentioned was more than half full of reddish, ropy, opaque secretion, about two large wash-hand basins full; with a copious sediment, as of a very puriform, semi-solid mucus, more or less in detached masses, variously tinted. The walls of the cyst were nearly a quarter of an inch thick; consisting of indurated liver and rather oedematous tissues, somewhat lacerable in a few points. One part nearly in front of the right kidney appeared to have given way before the inspection; and others gave way in the progress of separating adhesions which were of different degrees of firmness, but partial. The interior of the cyst presented many slight septa, in the form of flat folds, or sharp crescentic ridges, some four or five inches long and an inch in height. The lining had somewhat the appearance of a soft,

rough cuticle. Parts of the wall involving the liver seemed softened, and tending to suppuration. The fundus of the gall-bladder, expanded, thick, oedematous, and still reticular, formed the anterior parietes, and was about equal in superficial extent to a pint basin; and it was separated in part from the rest of the cyst by some of the crescentic septa above described.

Dr. Babington remarks:—"It did not appear in this case what had been the cause of obstruction to the cystic duct. No gall-stones were found; nor was there any trace of bile in the contents of the cyst. Whatever may have been its cause, I conceive that an inflammation had been set up in the gall-bladder; which led to the pouring forth of the mucus proper to the viscus, and ultimately, as suppuration advanced, of the fluid and semi-solid muco-purulent matter which has been already described."

We rather think there have been two or three cases recorded not very dissimilar to this. In one case a puncture was made by mistake into the distended gall-bladder. But in point of capacity this gall-bladder is probably unique.—*Med.-Chir. Review.*

REVIEW.

A Description of the Mineral Springs of Aix-la-Chapelle and Boreette; with some Account of the Curiosities of both Places, and the Environs. By L. WETZLAR, M.D., Physician at Aix-la-Chapelle. Churchill.

WE always open a physician's book on the subject of a Spa with some trepidation and distrust. Our profession's honour being more or less in the keeping of each of its members, we are compelled instinctively to ask with Solomon, "Who shall touch pitch and not be defiled?" For ages past our watering-places have been the happy rendezvous where the rich and ailing, and the poor and scheming, have met on common ground for their common benefit, and where without much concernment about virtue, the blessed of nature have been accustomed freely to indemnify themselves for the advantages too exclusively shared elsewhere by the blessed of fortune. They are the magic retreats in which the cats and mice—the shark and mackerel—the sharp and flat—the youth of the broad lands, and he of the dice-box—the rich octogenaire, and the young wit—the chandler's heiress, and the well-born wife-hunter—the affluent hypochondriac, and the needy physician disport in amorous dalliance together, the one giving food, the other excitement, and thus supplying the greatest wants of each other's existence.

To which of these two grand divisions of the human race, as seen in watering-places, Dr. Wetzlar belongs, or whether in such regions there be an intermediate section, within whose favourable boundaries he can claim classification, it would be, perhaps, rash thus early for us to predicate, but certainly the inclination of our mind, after glancing through his little work, is one that by no means represents him as among those denizens of watering-places more "sinned against than sinning." Much as he thinks of Aix-la-Chapelle, if all men were Dr. Wetzlars, we have some suspicion that Aix-la-Chapelle would be a place little worth living in, and Dr. Wetzlar, we imagine, would have scarcely dreamt that science required that he should write a book to make known the admirable virtues of a spa, which requiring a physician's care for its judicious use, (see page 43) is fortunate enough to have him for a physician in the neighbourhood—a book, too, be it remarked, not for the economic Germans, his own countrymen, or impoverished French, his neighbours, who living near by, might be more naturally expected to be drawn within

his net, but for the wealthier mi-lords and John Bulls of a distant island, which has Harrogate, Cheltenham, Bath, and a hundred other spas of its own, rich with every variety of quality and power, and besides many of which, Aix-la-Chapelle is as a Satyr to Hyperion! It is well to be instructed at all times; it is particularly well to be instructed by foreigners, especially when they take the trouble of instructing us in our own language, with the peril of no trifling expense through English publishers; but we must yet be allowed to estimate the extent of our obligations by the character of our benefactor's motives, an estimate to be obtained only by putting boldly to him the question *cui bono*? Does the following quotation give us any light on the matter:—

"During the last season, I was sent for by an *English gentleman*, who wished for my presence as soon as possible. I found a *very fat, plethoric-looking, middle-aged* person in a very excited, feverish state, and suffering most dreadfully from violent palpitations of the heart. He had come to Aix-la-Chapelle to be cured of an enlargement of the liver, and, without consulting any physician, he had directly applied himself to drinking and bathing. Though a liver complaint such as his was is a case in which the Aix-la-Chapelle waters are very efficacious, yet his plethoric condition and inclination to palpitations of the heart, rendered a cure at this place impossible. By an immediate bleeding and a strong aperient medicine, I contrived to stop the feverish symptoms, and some days afterwards he left the town to take a course of waters I advised him to follow for his liver complaint, at a renowned Bohemian Spa, where he completely recovered, as I convinced myself, when some months afterwards, on his return to England, he passed through this town."

What we have hinted, however, may be nothing but groundless suspicions; Dr. Wetzlar may have written his book solely for the good of such of our English invalids as have money to make so expensive a journey as that to Aix-la-Chapelle; but the means he has left us for forming a judgment are, unfortunately, of a kind strongly to set that judgment against him. If a superabounding love of science has misled the Doctor into his equivocal position, we commiserate, without still acquitting him; a physician owes it to himself and brethren not only to be pure, but to seem so.

After reading the little work with some attention, all we discover in it of importance, after some descriptions of fine scenery, splendid buildings, cheap and excellent restaurants, hotels, coffee-houses, &c., is the fact, that if people labouring under hypochondriasis, or any curable malady, drink the Aix-la-Chapelle waters under the direction of an Aix-la-Chapelle physician, and pay due and very strict attention to *bathing, diet, exercise, agreeable mental recreation, &c.*, why, they stand a very good chance of recovered health! If the Doctor's nearest sacerdotal friend, insisting on the same aids, were to substitute for the drinking of the waters a prayer to the *Madonna Loci* (so to speak), would the result be *very* different? The pious Abbé's course, however, would be stigmatized as crafty superstition; what name shall we affix then to that of the speculating physician? But let us be understood: we wish not to decry the use of mineral waters; of value by themselves as a therapeutic agent, they are often of superlative utility with their agreeable adjuncts; but we cannot allow them to be overlauded; above all overlauded in proportion, as they are distant and of expensive recourse, and we cannot consent that they shall be

turned (to the injury of professional repute) to purposes of low professional traffic, which, reviving the Mississippi, or West Middlesex Insurance schemes, on a smaller scale, would lay even distant countries under unscrupulous contribution.

We have only one word more to say against the work, which, to do rigid justice to the author, we are bound to mention—the *Lancet* has praised it. There is more vitality in the work than we think of—if it recover this last stroke.

MEDICAL MEMS. OF THE WEEK.

By PERISCOPICUS.

ENCYSTED TUMOURS.—Mr. Robinson, of Chapel Street, London, treats these as follows:—Make an incision into the tumour and discharge its contents; then cleanse out the cyst by means of lint and warm water, and when thoroughly cleansed fill the cyst with lint soaked in creosote, which must be removed daily, at least thoroughly cleansing the cyst each day as above named, and inserting fresh lint soaked in creosote. Continuing this treatment for about a week, you will be able, by a pair of dissecting forceps, to remove a part of the cyst, placing the patient in a good light, so that you may be able to see into the cyst when it is dilated. It will most likely happen that the whole of the cyst cannot be removed at once; then the same treatment of cleansing and inserting lint dipped in creosote must be observed till the whole of the cyst has been removed, and when the whole has been removed the part will collapse, and scarcely leave any mark. The only inconvenience, if it deserves the name, is, that the small opening left after the parts have collapsed, will from time to time require to have removed from it, by a blunt probe, any lint from the dress or dust that may have collected in it.

TREATMENT OF PULMONARY CONSUMPTION.—I am deeply and conscientiously convinced, says Sir C. Scudamore, that in proportion as the inhalation of iodine and conium in tubercular phthisis and chronic bronchitis is more used and really understood, and done justice to, so will its high value become known, and its good name be established. I pronounce it to be a very far superior remedy for inhalation than chlorine, creosote, or any other means which have been tried. In no other medicinal combination, indeed, can I find an approach to the curative power which this in a large degree possesses. This practice should be persevered with for a great length of time, beginning with twice a day, soon increasing to three times, then decreasing to twice afterwards to once, and even occasionally suspending its employment; by which plan, on its renewal, its efficacy may be the greater. As to the time also of continuing the inhaling, five or ten minutes may be mentioned for the beginning, to be increased in progress to fifteen, twenty, or twenty-five minutes. As an internal alterative, I think very favourably of the following mixture, which may be taken by itself, but usually agrees better when mixed with an equal proportion of very hot milk; two, or three, or four tablespoonfuls for the dose, two or three times a day:—R. Bruised sarsaparilla, 3ij; lime water, 3xij. Macerate for twelve hours and strain. R. Of the strained liquid, 3xj; syrup of sarsaparilla, 3vj; alkaline solution (Brandish), 3ij to 3iij; tincture of orange bark, or compound tincture of gentian, 3ij to 3ss; iodide of potassium, gr. ix, to gr. xii. Mix into a mixture. After a longer or shorter course of this medicine, I prescribe a preparation of quinine with the aromatic elixir of vitriol, and with or without the addition of small doses of sulphate of iron; or, in other instances, I am led

to prefer that excellent preparation, the *mistura ferri composita*. The usual practice of giving expectorants, with a view to free the bronchial morbid secretion, I disapprove of, as tending to debilitate the stomach, the powers of which it is so important to strengthen and improve; and for this object of free expectoration, I trust to inhalation and means that support the strength. The addition of saturated tincture of ipecacuanha to the inhaling mixture, is an useful incentive to expectoration. It is always important to the invalid that a good portion of sleep at night should be obtained. Sometimes this advantage will be allowed by the disease; but in the majority of cases aid is required on account of the irritation of cough, and of nervous restlessness. The following soothing syrup I have had reason to approve:—R. Solution of acetate of morphia (gr. j to gtt. vj), gtt. x; dilute sulphuric acid, 3ss to 3j; syrup of tolu, 3ix. Make into a syrup. Of this a teaspoonful is the ordinary dose, mixed with a little water; and it may be repeated in the night if necessary. If insufficiently anodyne, a small portion of Battley's sedative may be added. If the stomach require the addition of a stomachic ingredient, the tincture *cinnamomi composita* is the best that I can mention. Sir Charles's formula of the iodine solution is as follows:—R. Iodine; iodide of potassium, aa. gr. vj; water, 3v. to 3vj; alcohol, 3ij. M. To be used by inhalation. He begins with a small proportion, in no case less than 3ss, and in progress never exceeds the total dose of 3v, directing two-thirds of the quantity to be used for the first half of the time, and the other third for the remainder.

CONGENITAL DEAFNESS.—Dr. Knamer, of Berlin, after adducing much reasoning to prove that with regard to the alleged cures of the deaf and dumb, by Stard, Delean, there was either misrepresentation, or insufficiency of dates, proceeds to show that anatomically, there is in persons born deaf and dumb some essential and unconquerable defect. Bergmann, he says, found in the cavity of the tympanum a sarcomatous degeneration of the mucous membrane. The semicircular canals, ampullæ, and auditory nerve, could with difficulty be recognise. Coch found the cavity of the tympanum, the cells of the mastoid process, and the Eustachian tube, filled with a deep red-coloured growth in close apposition with the tympanum and small bones. In two cases part of the semicircular canals was wanting; in a third there was no trace of the fenestrum rotundum; in a fourth the aqueductus vestibuli was large enough to let through a small probe; in another the horizontal and oblique semicircular canals were entirely wanting. In one case the cochlea was absent; in another the two scalæ cochleæ ended, each for itself, in a cul de sac. In two cases two of the semicircular canals were closed in the middle, &c. Arnemann noticed the auditory nerve, not only larger, but harder than usual, and divided into several fasciculæ. Hyrtl, in two cases, found a remarkable defect in the semicircular canals and cochlea, and the nerve of audition greatly degenerated. Another case wanted the lamina spiralis of the cochlea, the semicircular canals were considerably smaller than natural, and in one ear the stapes was absent. Thurnam observed, in a boy of thirteen years, the cochlea filled with a gaseous matter, one of the semicircular canals imperfect, and no trace of the sacculus vestibuli nor membrane lining the semicircular canals. Clarus found in two cases neither the fenestra rotunda, the os lenticulare, nor the stapes; in a third the auditory nerve was smaller than natural; in a fourth the cavity of the tympanum narrower than usual, and the vestibulum sunk deep in a mass of bone. Mondini saw in a cochlea only

one turn and a half; the upper one was deficient. Mücke and Bochdalek saw the vestibulum having no communication with the semicircular canals.—If these be not the causes of all congenital deafness, there only remains a weakness of the nerve equal or approaching to paralysis; this, he says, offers equal impossibility of effectual cure, with the other defective conditions.

RHINOPLASTIC OPERATION.—John Jarney, a healthy-looking youth, eighteen years of age, was admitted into University Hospital, under the care of Mr. Liston, May 18th. About four years ago his nose was broken by the kick of a horse; after the accident abscesses began to form about the nose, followed by exfoliation of portions of the right superior maxillary bone, and loss of the superior incisors. The ossa nasi and turbinated bones followed; the alæ and cartilages being also destroyed by ulceration. At about the end of the two years the soft parts cicatrized, and there has been since no further exfoliation of bone. All the external parts of the nose are gone, with much of the internal structure. The sense of smelling is destroyed; there is an ugly distortion of the mouth towards the right side, from contraction of cicatrices. Ulceration, as far as can be judged by sight, has entirely ceased; but he says there is occasionally a foetid discharge from the "cavern," that remains in place of the lost member. May 20. The operation was commenced by cutting a groove in the integuments on each side of the cavity, about two lines in width, to receive the edges of the flap, which was to form the new organ. A piece of soft leather, of the size and form required for the flap, being laid on the forehead, a corresponding portion of integument was cut through and dissected up, being left adherent only by a long, narrow pedicle, towards the root of the nose (this portion is dissected up as deeply as possible, without denuding the sub-adjacent bone, to ensure the nutrition of the flap). The flap being thus raised was allowed to hang down until hæmorrhage ceased, after which it was twisted round, and laid down, and its borders accurately adapted to the grooves prepared for them, were fixed by four or five points of interrupted suture. Dossils of lint being then placed under the attached flap, it presented the appearance of a "seemly nose." No kind of dressing was applied to secure coaptation of the flap to the grooves, in addition to the sutures. June 7. The progress of the case has been in every way satisfactory, the new organ looking rather thick and œdematous; to remove this condition a sort of "saddle" was made, to be placed over the nose, and secured behind the head by tapes. This instrument, which is made of a pretty good shape for a nose, is supplied with a screw and spring, by which it may be dilated, or made to contract, and exercise a pressure on the organ. The apparatus was worn throughout the greater part of the patient's stay in the hospital, being removed occasionally, as it tended to produce ulceration of the cicatrix, by which the new organ is united to the face. 28. On this day, the wound in the forehead being cicatrized, the attachment of the flap to the forehead was divided, and a groove being made for it in the integument, it was laid down, and fixed with a point of suture. No dressings were applied in this instance, the blood being allowed to coagulate about the wound, and keep the edges together, as in the operation for hare-lip. Adhesion soon took place; the cavity of the nose got nearly filled up by the granulation from the under surface of the flap, and required daily a smaller dossil of lint to be introduced. The young man has continued throughout in good health—has had a good meat diet, without any

beer, or other liquor. 21. He left the hospital this day, much satisfied with his improved personal appearance, and with a good-looking nose.

PHTHISIS.—I do not, says Sir C. Scudamore, at all subscribe to the opinion of Laennec, of the inutility of art in the first stage of the disease. On the contrary, I assert that it is then we have most opportunity of being useful. It is true that the disease does sometimes set in with such violence as to form acute (galloping) consumption, and defy all means of treatment to arrest its fatal progress. These instances are exceptions to the general rule.

RHUBARB AS AN APPLICATION TO ULCERATED SURFACES.—A patient had been an inmate of a French hospital upwards of two months, for severe and extensive ulceration of the abdomen, occupying the whole of its right side and greater part of its left. Almost every plan of treatment had been adopted; even the actual cautery had been applied three times, but without producing any arrest to the progress of the sloughing. Powdered rhubarb was now applied in very small quantity, on account of the violent irritation it produced. Over this was placed some linen with holes cut in it about a quarter of an inch apart (*linge troué*, as it was called by the French), which was covered with charpie. The following morning, a decided amelioration was perceptible. M. Cullerier advised some camphor to be added to the rhubarb, in order, to mitigate the pain occasioned by the application. This was done; but it had not the desired effect. The powder was then only applied every other day for about six weeks, when the ulcers had nearly healed. His appetite, spirits, and appearance, daily improved, and in about a fortnight afterwards he was able to leave the hospital quite recovered.

SCROFULA AND CONSUMPTION.—I venture, says Sir C. Scudamore, to think that these two diseases are of a distinct nature, each dependent on a different specific virus. We see daily the strongest instances of scrofula, as shown in the enlargement and suppuration of glands, most commonly the cervical, with frequent accompaniment of disease of the hip, knee, or elbow-joints, or other parts, without any evident disposition being shown to pulmonary consumption; while, on the other hand, acute and chronic phthisis constantly appear free from any of the external characters of scrofula. I know several individuals, at present enjoying health, whom I remember to have seen more than thirty years ago, then strongly affected with scrofula, and now bearing the characteristic scar of the neck, who have never had a symptom of consumption. In the surgical ward of the Marylebone Infirmary there are two children, one eight, the other six years of age. The first underwent amputation of the arm above the diseased elbow-joint two years ago, and has at present very enlarged cervical glands, but is described by the nurse as being in very good general health, and regularly gaining flesh and strength. The other child has enlarged and partially suppurating cervical glands, with a strongly-marked scrofulous appearance, but appears otherwise well, and very cheerful. I found the animal heat of each child to be 98°.—It is quite true, however, that the two diseases are in some constitutions unhappily blended; the scrofulous exerting its sway first for a longer or shorter time, then probably being suspended, and superseded by the more fatal virulence of consumption.

AMENORRHOEA.—M. Andrieux, of Brionde, treats amenorrhœa by applying what he calls a speculum pump to the os uteri. His plan consists in applying a cupping-glass, by means of a tubulated speculum, to the inner tube of which is attached, at its external extremity, a piston; the other end embraces the neck of the womb.

The instrument is made of copper, and as the inner tube cannot fit the wombs of all women, it may be unscrewed from the outer, and replaced by a larger or smaller one. M. Andrieux has used this instrument sixteen times; in twelve cases with perfect success; three, where the catamenia appeared, were afterwards lost sight of, and the sixteenth refused to have it applied a second time. She was suspected to be labouring under pulmonary tubercles. Its use has never produced any injurious consequences; but M. Andrieux recommends its effects should be watched by the eye. It ought to be used a few days before the presumed period, and care must be taken that the os uteri is lodged within the tube.

ANTIMONY AS A POISON.—In a paper read before the Academy of Medicine of Paris, Messrs. Flandin and Danger stated that they were led to the experiments, the result of which they have submitted to the Academy, by a desire to ascertain to what extent the existence of poison in the body can be ascertained with reference to medical jurisprudence. They used for their analysis the apparatus of Marsh, but with all the modifications which recent circumstances have shown to be necessary, and have arrived at the conclusion that antimonial, like arsenical stains, are, to a degree, fallacious. Their experiments confirm, both as regards antimony and arsenic, the assertion of other eminent chemists, that M. Orfila was in error when he said that their existence can be ascertained in the bones of animals to which they have been given. With reference to the use of antimony as a medicine, they stated that they had administered this substance in various doses to several dogs; and, upon dissection after death, and careful analysis with the apparatus of Marsh, they ascertained that it had not been absorbed into the system generally, but into particular organs, without regard to the hitherto received notions of vascularity. Whatever was the quantity or the mode of injection of the poison, none was found in the lungs; and almost invariably the presence of the poison after death was indicated exclusively in the liver. In the nervous and osseous system there were no traces of poison, and this also appears to be the case with arsenic.

PURE BORACIC ACID.—The usual method of preparing boracic acid consists in decomposing borax by means of sulphuric acid; but the boracic acid thus obtained is always contaminated with a certain quantity of the sulphuric acid used in its preparation. M. Wackenroder has pointed out a better method, as follows: dissolve forty parts of borax in one hundred parts of boiling water, and add twenty-five parts of hydrochloric acid to the solution while hot. Collect, on a filter, the boracic acid, which will crystallize on the cooling of the liquor, wash it a few times with cold water, allow it to drain, redissolve it in a little hot water, and crystallize it a second time. Wash the crystals with a little cold water, and press them between folds of filtering paper. The mother-water and the washings of the crystals may be evaporated so as to afford a further quantity of the acid. This boracic acid, when dry, will still retain a trace of free hydrochloric acid, which may be driven off with a part of the water of crystallization by drying the acid at a temperature of about 234° Fah. After this operation the acid is pure.

BENZOIC ACID.—To obtain this very pure, and free from empyreumatic smell, mix, says M. Jaussens, one part of benzoic acid of commerce with eight parts of distilled water, add an excess of solution of ammonia, and afterwards treat the solution of benzoate of ammonia formed, with purified animal charcoal. Filter the solution, and decompose it with hydrochlo-

ric acid: the benzoic acid will be separated in the form of beautifully white flakes. These flakes, thrown on to a filter and washed several times with distilled water, are afterwards to be drained, and then dissolved in a sufficient quantity of alcohol. The alcoholic solution is to be filtered, and then diluted with distilled water, so as to precipitate the benzoic acid, which is but sparingly soluble in this liquid. By this means, the essential oil, to the presence of which in the ordinary flowers of benzoin their peculiar smell is due, is retained in solution in the alcoholic liquor. It only remains to crystallize or sublime the precipitated acid to obtain it in a state of great purity and beauty.

BELLADONNA IN STRANGULATED HERNIA.—In September, 1838, a woman, aged 68, experienced a swelling in the right groin, during the occurrence of a severe cough; this was followed by pain and tenderness in the part, vomiting, sleeplessness, and pain in the abdomen. Examination showed a strangulated hernia, which could not be reduced. The author directed injections of belladonna (one scruple of the leaves in each) to be administered. After three clysters the taxis was again employed, and the hernia returned without difficulty.—A man, aged forty years, had from his youth suffered under an inguinal hernia of the right side, which became incarcerated whilst he was loading a waggon with wood. After taxis, bleeding, cold applications, and other means had been tried without success, three injections of belladonna were given. The effect of these clysters showed themselves after awhile by symptoms of narcotism, as restlessness, delirium, dilated pupil, &c., which subsided under the employment of cold applications to the head. Reduction was then again attempted, and the hernia returned with little trouble.

THE SECRETION OF SWEAT.—The organs, which secrete the sweat, which were first pointed out by Breschet, and afterwards described by Purkinje, Gurlt, Wagner, Serres, Arnold, Madden, and others, exist in great numbers in the palm of the hand, and in the soles of the feet, in which situations they are very numerous, and being well developed, are more easily examined than elsewhere. They exist also, and are of tolerable size, in all the spots covered with hair, as the armpits, perinæum, scalp, &c. They are also seen over the whole surface of the derma, but are there extremely small, almost rudimentary. These organs are composed, according to Dr. Giraldes, not of simple canals divided at their extremity, but of a straight canal, which pierces through the whole thickness of the derma, and is imbedded in the fatty layer beneath it. Sometimes they penetrate this fatty layer to a very considerable depth; at the extremities of the fingers they even seem to traverse it completely. Arrived at this point, these canals sometimes dichotomize; in general, however, they remain simple, and roll on themselves, so as to form a small button-shaped body. These convolutions are sometimes all on the same plane; at other times, so as to form a spheroidal appearance. Dr. Giraldes states that he has shown this structure to Professor Serres.

ACUTE HYDROCEPHALUS.—A boy, two years and a half old, well nourished, robust, and with a prominent forehead, became unwell on December 8, 1841. The symptoms were those of an inflammatory cerebral affection, attended with fever. The disease had made considerable progress by the 14th, which was the day on which the author first saw the patient. The prognosis was the more unfavourable, inasmuch as the great fontanelle was unclosed to the extent of an inch in diameter. Every means was put in requisition—blood-letting,

calomel internally, mercurial friction on the nape of the neck, blisters, cold applications to the head—without benefit. The disease went on increasing, and seemed on the 26th to have reached its height. The little patient lay powerless and stupid, the head and face flushed and hot; there was grinding of the teeth; the pupils were relaxed and insensible to light. The child had ceased to scream. The diuretic medicine resorted to latterly had failed to promote the urinary secretion. While in this state, on the 20th day of the disease, there flowed from the right ear such a quantity of pure and limpid fluid as drenched thoroughly the child's neck-erchiefs. On the same evening the patient was much relieved. By the use of diuretics the flow of urine was now maintained, in a copious current, during many days. The coma, in which the child has been for some days, disappeared; the pupil regained motion; in six weeks the little patient was completely cured.

THE GYMNOTUS ELECTRICUS AND TORPEDO.—Mr. Letheby read a paper recently in the Electrical Society, for the purpose of showing that these animals derive their electricity from the brain and cord, and that the nervous and electrical forces are identical. The anatomy, he said, went to show that the electrical organs were not superadditions of a peculiar structure, but the result of an increased development of the aponeurotic intermuscular septa, which thereby pushed the lateral planes of muscles upwards to the back; these aponeurotic septa became so arranged as to form long tubes or cells, which ran diagonally from within outwards; and the juxta-position of these tubes made the longitudinal laminae which traversed the whole length of the organ. The number of tubes in an entire animal was about 550,000. The organ was found to be largely supplied by the spinal nerves, which formed loops between the laminae. The peculiar nerve of Hunter, called by Mr. Letheby the *posterior* or *dorsal* branch of the fifth, being distributed entirely to the muscles of the back. The experiments of Williamson, Humboldt, and Faraday, on the *Gymnotus Electricus*, and those of Walsh, Davy, Todd, and others, on the *Torpedo*, fully proved the identity of their phenomena with those of ordinary electricity, inasmuch as in both they obtained the shock, the spark, deflected the galvanometer, made magnets, and decomposed water; while the laws governing the discharges were, that they were voluntary, had a determinate course, and depended on the integrity of the nerves. The two principal facts resulting from dissection were, that, in all electrical animals, there were organs made up of aponeurotic septa, arranged so as to form cells, in which was contained an albumino-gelatinous fluid. These organs were always supplied very largely by nerves of sensation and motion, and not of organic life; and this supply was much greater than necessary for the purposes of life; and the question now arose, whether the organs originated the electrical force, or whether it was supplied by the nerves, and there made tense, as in a Leyden battery. The arguments in favour of the former were, that two fluids, dissimilar in composition, or even density, and separated by a membrane, would give rise to electricity; and such an arrangement might exist in these organs: but then the phenomena would be physical, not vital; and it would not explain how it was accumulated, why it was at the voluntary service of the animal, or why discharges did not take place at all times. On the other hand, division of nerves preventing discharge, irritation of the brain increasing the discharge, its voluntary nature, together with the anatomical considerations of the nervous supply, and the arrangements of the organ itself, being composed alternately of a con-

ductor and non-conductor, favoured the view that the electricity was supplied by the nerves. In addition to these considerations, the view of Liebig, that all vitality depended on chemical action; the fact that the vital force in motion effected combination (nutrition and reproduction), and decomposition (muscular action, &c.); the experiments of physiologists, especially Wilson Philip, which proved that electricity, sent along nerves, gave rise to phenomena allied to those of vitality, viz., produced motion, sensation, and secretion, and the experiments of Professor Zantadeschi and Dr. Favio, which sufficiently proved the presence of two neuro-electric currents in warm-blooded animals, during the performance of the functions justified the following deductions:—1. All vitality is the result of chemical action. Electricity is the result of chemical action. 2. The vital force in motion effects combinations (vegetative life), and decompositions (animal life). The electrical force in motion effects combinations and decompositions. 3. During the performance of the vital functions, electricity has been detected in warm-blooded animals. Electricity sent along nerves gives rise to phenomena not to be distinguished from the vital—viz., sensation, motion, and secretion. 4. The phenomena of the *gymnotus* and *torpedo* have been proved to be electrical; and reasons were adopted to show that this electricity was derived from the brain and cord.

CHANCER, &c.—J. M., aged 32, labourer, admitted to University College Hospital as an out-patient, Aug. 10, 1841, under the care of Mr. Morton: a year ago contracted a primary chancre on the corona glandis, for which he underwent a mercurial course, the sore being touched at the same time with the nitrate of silver. Under this treatment the chancre healed slowly. He had no bubo at this time. About six months afterwards, large, soft, warty excrescences made their appearance about the margin of the anus. Several warts also commenced to grow at the same time upon the glans penis and under-surface of the prepuce. A month after the commencement of these symptoms, a small ulceration, "beginning like a blister, which soon festered," broke out on the site of the original chancre, and has remained open ever since without any change in its character, which is that of a simple ulcer. He has not taken any medicine for these secondary affections, nor used any other local remedies besides a common poultice to the sores. There are sores between the toes excessively painful and tender when touched; their surface is excavated and covered with a greyish-coloured pulpy substance, very much resembling a slough; their edges are sharp and somewhat elevated. There is no appearance of any attempt at the formation of granulations upon their surface. The sores upon the toes were ordered to be touched freely with the undiluted nitric acid; while the verrucæ on the penis, and around the margin of the anus, were rubbed with a pencil of the lunar caustic.—19. The verrucæ on the penis and around the anus have almost disappeared under the beneficial influence of the lunar caustic, which has been applied every second or third day. The sore on the corona glandis has healed under the local application of the sulphate of copper. The ulcers between the toes are almost well; but as what yet remains of them presents the same ashy, aphthous-looking crust, the nitric acid is ordered to be again applied to them.—26. Is very much improved in his general health, while at the same time the verrucæ have been completely removed. The sores between the toes are almost well. The sore on the corona glandis is completely cicatrized. He was now ordered to take two ounces of decoction of sarsa,

with four grains of iodide of potassium, three times a day.—Sept. 10. Discharged well.

OXALATE OF LIME IN THE URINE.—John Berry, æt. 31, admitted under Dr. G. Bird's care, June 3, 1842. A remarkably fine man, extremely emaciated, his cheeks hollow, his whole appearance resembling that of a diabetic patient, a currier, is exposed to extreme alternations of temperature, working in a half bent position, without coat or waistcoat, in a shop through which are constant currents of air. He is unmarried, has been very irregular with regard to women; for two years has been gradually losing flesh, strength, and spirits; his sexual powers have also rapidly declined, and now scarcely exist; he has frequent seminal emissions in his sleep, which leave him weak, exhausted, and melancholy, during the ensuing day. He considers he has been temperate, rarely getting intoxicated more than twice a week, and then on porter or ale. During two months his decline has been rapid; has now an almost constant headache, a constant aching pain across the loins, a sense of sinking at the stomach, as if, to use his own expression, he had no inside; frequent chills, with cold and clammy sweats, succeeded by feverish flushes; tongue red at the tip and edges, with a white central fur; frequent giddiness; his memory has been for some time failing. His nights are wretchedly restless, generally tossing all night from side to side, in vain endeavouring to sleep, and if he does slumber, he awakes as fatigued as when he retired to rest; appetite bad; no thirst; frequent palpitation and flatulence; pulse small and irritable; no chest disease. Sumat. Pulv. Rhæi Salin. 3j., cras mane.—5th. Bowels acted once yesterday from the powder; handstremulous. The urine passed last night was deep amber-coloured, acid, of a density of 1.030, no visible deposit; by microscopic examination, however, myriads of splendid octahedral crystals of oxalate of lime became visible. On the addition of nitric acid to the urine, a copious formation of crystals of nitrate of urea occurred. The urine passed this morning was paler, acid, of a density of 1.025, and contained less oxalate and urea. Pil. Col. c. Hyd. ij. o. n. s.; Acid. Nitric. dilut. m. xv. ter die, ex. Dec. Cinchonæ, 3j. Nutritious diet, light pudding daily, no beer, weak brandy-and-water at dinner.—15th. Bowels act thrice daily; motions offensive and dark-coloured; complains greatly of palpitation of the heart. Rep. Mist. c. Inf. Serpentariæ. loco. Dec. Cinchonæ. The urine passed last night was deep amber-coloured, of specific gravity 1.028; the microscope detected myriads of smaller octahedra than before. The morning urine was of a density of 1.018.—28th. Very much improved; rests better at night; no lumbar pain; great sense of sinking at the scrobiculus cordis. Night urine, 1.026, deposited phosphates by heat, and contained numerous minute crystals of oxalate of lime. Morning urine 1.026, like the night specimen, but did not become opaque by heat. M. Ferri Co. 3j.; c. Tr. Lyttæ. m. x. b. d.—July 2d. Improving; seminal emissions ceased. Still copious octahedra in the night urine, which is of the density 1.025. Sumat. Vin. Sem. Colch. m. xx. ex. Mist. Gent. Co. 3j. b. d.—10th. So much better that he is anxious to leave London on a long journey; the urine is now free from oxalate.

DIMENSIONS OF DIFFERENT SKULLS.—Tiedemann gives tables of the internal area of the skull in Europeans, Americans, Malays, and Negroes. Of the first he adduces 77 examples; of the second, 24; of the third, 38; and of the fourth, 48. The method of gauging each which he employed was to ascertain the weight of millet-seed required to fill it. I find by averaging his tables, that the European or

Caucasian cranium contains 40 ounces; the American and Malay, 39; the Negro cranium, 37 only. In other tables in the same paper the length and breadth of the European cranium are shown to exceed those of the Negro cranium; and a very curious fact is added respecting the brain of the Bosjes woman, who was called the Hottentot Venus. The convolutions of the hemispheres in this specimen (the dimensions of which are likewise of the smallest), are more strictly symmetrical than is the case in European brains. This feature (absent, I may mention, says Mr. Mayo, in the brain of a New Zealander which I examined) is an approach towards the type of the cerebral organization of animals, as distinguished from that of human beings. From the oran-otang downwards, the two cerebral hemispheres of animals exhibit, in their superficial markings, great closeness of resemblance; whereas in European brains the resemblance of the gyri of the two sides is general only, and the details of their disposition vary remarkably.

TUMOUR OF THE LABIA MAJORA.—M. Denouvilliers lately removed a tumour of considerable size from one of the labia majora of a young girl. There was a degree of fluctuation which induced a doubt as to whether it was a simple cyst or a degeneration similar to the elephantiasis of the Arabs. The latter opinion was, however, adopted; and to prevent the extraordinary development which tumours of this kind sometimes attain, its removal was resolved on. Dissection showed the justice of the diagnosis. The wound healed by the first intention. The opposite labium, however, presents the commencement of a similar swelling.

FOREIGN BODY CONTAINED IN A HERNIA.—The same surgeon relates the case of an old man 70 years of age, who died after the operation for strangulated femoral hernia. The patient had never been previously affected with rupture. When operated on, the tumour was red, painful, and perfectly irreducible; the pulse small and frequent; the features contracted, &c. At the autopsy, the ruptured portion was found to belong to the small intestine; it contained a small cherry. It is difficult to say what influence this body had in the production of the hernia. Its effects over the result of the operation were, however, of a very fatal character; for a small perforation existed at that part of the intestine which was in contact with this body. The peritoneum also presented traces of inflammation in an advanced stage, but there was no effusion of stercoraceous matter.

REMEDY FOR TOOTH-ACHE.—To two parts of fine powdered alum add seven of nitric ether; mix speedily, and apply it at once semi-liquid to the affected tooth.

A NEW EXTRACT FROM BARK.—M. Manzini states that he has succeeded in obtaining a new alkaline product from Peruvian bark, and which he has named chinchovine or quinovine. Its mode of preparation is exactly similar to that of quinine. It is obtained under the form of prismatic, elongated, white, inodorous crystals, having a bitter taste. It is readily soluble in alcohol, especially hot; less so in ether, and almost insoluble in water. The dilute acids dissolve it, forming crystallisable salts, which are very soluble in alcohol (less so in hot than in cold) but the solutions of which are readily precipitated by the alkalies and their carbonates.* M. Manzini, however, does not state that this preparation possesses any property, varying from that of the already known products of bark.

* The alcoholic solution of chinchovine is excessively bitter; it restores the blue colour or litmus paper when reddened by acids, and turns green the syrup of violets.

FOREIGN LIBRARY OF MEDICINE, SURGERY, AND THE COLLATERAL SCIENCES.

[Exclusively compiled for the MEDICAL TIMES from French, Italian, and other Continental Periodicals.]

KLENCKE, H. Dr., *Der Leberthran*—On Cod Liver Oil, and its Sanatory Influence, from Observations on Animals, &c. Leipzig, 8vo.—BOURNON DE LAYNE, BARON, *Die Dampfwäsche*—On Steam Washing; or the Cleansing of Linen, Bed-furniture, by Steam. For the use of Hospitals, barracks, &c. Translated from the French, with Additions. Weimar, 8vo., Third Edition.—RÖSLIN, E. Dr., *Heilart*—Unfailing Cure of Spitting of Blood, and Phthisis without Medicine, by mere Diet and a Summer Cure. Hall, 8vo.—VOGT, PH. F. W. Dr., *Lehrbuch*—Manual of Pharmacodynamik. Giessen, 8vo., 2 vols., 4th cheaper Edition.—BEAUVOISINS, Dr., *Maladies*—Cancer treated without Cutting. Paris.—STEUDEL, E. G. Dr., *Wasserheil Aestalten*—On the Cold Water Cure, and its Relation to Mineral Baths and Mineral Springs. Esslingen, 8vo.—LEDERER, T., *Mutter und Kind*—Mother and Child, or Pregnancy, Lying-in, and Nursing, and the Prevalent Prejudices of our Times. Vienna, 8vo., Second Edition.—DARSTELLUNG—Short Account of the Principal Mineral Springs of Europe. Augsburg, 8vo.—THIERWELT—The Animal World, according to Oken's Natural System. Augsburg, 8vo.—BALLING, F. A. Dr., *Heil Quellen*—The Mineral Waters and Bath of Kissingen, a Vade Mecum for Patients. Stuttgart, 8vo., with a Map, Second Edition.—RICHTER, G. H. Dr., *Lebensregeln*—Sanatory and Dietetical Rules for Patients in Wiesbaden. Dusseldorf, 8vo.—JUNGKEN, J. C., *Lehre*—Doctrine of Ophthalmology, for the Use of Lecturers and Students. Berlin, gr. 8vo.—BUFFON, *Œuvres*—Complete Works, Revised by M. Richard, Professor of the Ecole de Medicine. Paris, 18 vols., with 125 Plates.—SCHULTZ, C. Dr., *Die Cyclose*—The Ciclosis of the Vital Sap in Plants. Bonn, 4to. with 30 Plates.—SCULEIDEN, Dr. M. J.—Dr. Justus Liebig and his Position relative to the Science of the Physiology of Plants. Leipzig, 8vo.—SCHULTZ, PROFESSOR, Berlin—On the Regenerative Powers of Nature in Man, being the Application of Physiological Principles to Practice. Berlin, 8vo.

MEDICAL NEWS.

The remains of Baron Larrey were interred on the 11th inst., in the Church of St. Germain l'Auxerrois. Besides the friends and relatives, representatives of all the Paris scientific societies attended the obsequies. A number of funeral orations were delivered; that by M. Breschet was most admired.

TYPHUS FEVER.—M. Boulland moved in the French Academy for a Committee of Enquiry, as to the mode of treatment which experience proved, or reason suggested, as the most efficacious for the cure of this malady, now lamentably so common in Paris. The motion has been referred to the consideration of a sub-committee; in other words, says a French contemporary, adjourned *sine die*.

UNIVERSITY OF LONDON.—Candidates who passed the First Examination in August, 1842. *First Division*: Hugh Bell, Guy's Hospital; Frederick James Brown, University College; Henry Browne, King's College; Joseph Hullett Browne, Guy's Hospital; William Thomas Edwards, University College; James Ellison, St. Bartholomew's Hospital; Robert Haines, St. Thomas's; Robert Dawson Harling, University College; Frederick Marshall, University College; William Henry Parsey, King's College; John Wilson Croker Pennell, Guy's Hospital; James Russell, King's College; Robert John Spitta, St. George's Hospital; Henry Sharp Taylor, University College; Richard Tudor, University College; Stephen Henry Ward, London Hospital; Henry March Webb, Guy's Hospital.—*Second Division*: Henry Cannon, King's College; John Crutch, St.

George's Hospital; Frederick Field, Birmingham Royal School of Medicine; John Cooper Forster, Guy's Hospital; Thomas Humphreys, University College; Frederick Robert Manson, King's College; Charles Henry Felix Routh, University College; Godwin William Timms, University College.—**EXAMINATION FOR HONORS.**—Candidates who passed this Examination.—*Anatomy and Physiology*: Robert D. Harling (exhibition and gold medal), University College; William Thomas Edwards (gold medal), University College; Frederick James Brown, University College; William Henry Parsey, King's College; Henry March Webb, Guy's Hospital; Frederick Marshall, University College.—*Chemistry*: Robert Haines (gold medal), St. Thomas's; William Thomas Edwards, University College; William Henry Parsey, King's College; Frederick Marshall, University College.—*Materia Medica and Pharmaceutical Chemistry*: Henry March Webb (exhibition and gold medal), Guy's Hospital; William Thomas Edwards (gold medal), University College; Frederick Marshall, University College; Robert Haines, St. Thomas's.

SUBSCRIPTION FOR A MONUMENT TO BARON LARREY.—The Gazette Medicale gives a letter, bearing the signatures of MM. Casimir, Broussais, Michel Levy, and E. Millon, proposing a subscription to erect a monument to the late Baron Larrey, as was done three years ago for M. Broussais. They request that the appeal may not be confined to France, but extended throughout Europe; "for the name of Larrey," they say, "has found admirers wherever science and humanity have obtained honour and credit; therefore, let the monument which we desire for him, be the produce of an European subscription. A crowd of our brethren entertain the same wish. It is the duty of medical men to guard the honour of their profession; and statues and monuments are but little common among them; happy is the age which has occasion to raise them!" M. Begin, first professor at the Val-de-Grâce, has just been elected to the post of inspector-general and member of the "Conseil de Sante des Armées," in the place of Baron Larrey.

ROYAL COLLEGE OF SURGEONS, LONDON.

List of gentlemen admitted members on Friday, August 12, 1842:—

E. Wardley, G. Adams, W. P. Stiff, A. Lloyd, W. Skelding, T. Martin, F. Anderson, C. Miller, R. Irwin, J. Jennings, A. Furlong, J. Hewitt.

Admitted Monday, August 15, 1842:—

C. Jukes, R. C. Russell, J. Richardson, W. O. Barker, T. W. Challinor, J. Briscoe, T. Taylor, F. J. M. Mosgrove, W. A. Sumner, J. B. Fletcher, G. Cronyn, W. A. James, R. Wilson, R. W. Moore.

Admitted Friday, August 19th, 1842:—

M. Young, R. Colgate, G. W. Trenery, J. L. W. Dixon, J. Laffan, J. Ellam, A. C. Tupper, M. W. Eager, W. J. Macdougall, G. Dimock.

Admitted Monday, August 22nd, 1842:—

F. M. Russell, H. Daniels, T. Lithgoe, E. Hall, A. C. Barker, J. S. Alger, J. Mc Kee, W. Wills, C. A. Brew, J. J. Davies.

ERRATA in last number.—In page 326, in Mr. Horne's letter, for *Aquæ Æj.*, read *lb. j.*—In first leader, page 328, column 3, for "patient's look out," read "patients' look out."—In page 329, column 2, for "following extracts," read "following extract."—For an opinion in the subject, read opinion on the subject.—In List of Gentlemen admitted Members of the College, August 5, for H. Jones, read W. Jones.

ADVERTISEMENTS.

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"A most instructive work for the general reader."—London Medical and Surgical Journal.

London: John Churchill. Paris: Galignani and Co.

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J. G. ANDREWS.

April 20, 1842.

From Anthony White, Esq., Parliament-street, one of the Council, and late President of the Royal College of Surgeons.

I can with much satisfaction recommend to the public the boot or shoe which is denominated Impilia. Its peculiar advantages over all other boots or shoes are, that it is impermeable to wet and damp, and always gives an agreeable and constant warmth to the feet; is also elastic, and is admirably adapted to tender and crippled feet from gout or other maladies.

ANTHONY WHITE.

April 6, 1842.

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J. A. PARIS, M.D.

From Dr. Roots, Russell-square, London.
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H. S. ROOTS, M.D.

W. Baker, Esq.—April 25, 1842.

From Dr. Hodgkin, Lower Brook-street, London.
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THOMAS HODGKIN, M.D.

30-4, 1842.

From John C. Taunton, Esq., M.R.C.S., 48, Hatton-garden.
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THE MEDICAL TIMES.

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COURSE OF LECTURES ON THE THEORY AND PRACTICE OF MEDICINE.

Delivered by C. J. B. WILLIAMS, M.D., F.R.S., Professor of the Practice of Medicine, and of Clinical Medicine, at University College.

GENTLEMEN,—Our next subject is *Determination of Blood, or Active Hyperæmia, with increased motion*. We are presented with numerous *physiological* examples of this condition, as in the formation of the antlers of the stag—in the development of the gravid uterus—and in the increasing size of the female breast during the period of lactation. In these cases the vessels of the parts contain more than their ordinary amount of blood, and consequently there will exist a greater degree of heat and redness, also frequently a sensation of arterial throbbing. There are, too, many instances of *pathological* determination, in which similar phenomena are observed; thus, determination of blood to the brain is often accompanied by strong beating of the carotid arteries, fullness of the eyes, flushing of the cheeks, &c.; this throbbing of the carotids has frequently been noticed to precede the commencement of hysterical and epileptic fits. The increased flow of blood to a particular part is generally caused by the application of a *stimulus*; thus determination to the nose is produced by snuff, to the mouth by spices, to the intestinal mucous membrane by purgatives, and to the kidneys by diuretic substances—in all these cases there is increased flow of blood to the parts. We can easily perceive from these examples that determination must be a very important element of disease as well as of its treatment; there are, indeed, few maladies unconnected with its existence, either in a greater or less degree. Broussais included nearly all morbid phenomena under the term *irritation*, by which he intended what is almost equivalent to our understanding of *determination*.

Let us now enquire into some of the *causes* of this element. One cause that may readily be suggested is, *increased action of the heart*; but a little consideration will prove that such action would not be calculated to produce the precise circumstances that determination presents, for augmented energy of the heart would affect the whole system, and especially the vessels in the more immediate neighbourhood of the circulating organ, instead of a limited portion of vessels at a much more distant locality. Another, and most conclusive reason, against the agency of the heart in causing determination, is the fact that determination is not necessarily attended by any increased action of the heart at all, but such action is, on the contrary, not unfrequently *diminished*. This being satisfactorily established, it is clear that the phenomenon under consideration must be dependent upon some changes arising in the properties of the *vessels* themselves. Some have supposed that this alteration consists in increased *tonicity* and contraction of the vessels, but this idea must obviously be in-

correct, because we know that increased tonicity would tend to *diminish* the determination of blood by diminishing the calibre of the vessels containing it. We may ask whether there is any *relaxation* of the vessels? Undoubtedly there is, but how would this account for increased *motion* of the blood? It must depend upon an *increase* in the *size* of the arteries leading to the capillaries of a part. That the arteries are enlarged may be seen, and a consequent increase of the pulsation is quite perceptible to the touch, the coats being distended, and their tonicity impaired. The pulse is strong and *hard*, because the artery is distended to its utmost, and is unyielding. This enlargement of the arteries must soon extend to the capillary vessels, and also to the veins; the enlargement may indeed *commence* in the capillaries, and be propagated backwards to the arteries, and thus induce an augmented flow of blood to such distended capillaries.

The phenomena observed with the microscope, when a stimulus is applied to the web of a frog's foot, are, first a slight *contraction* of the arteries, and a diminished flow of blood through them; this contraction is soon followed by *dilatation*, and increased force and quantity of circulation.* Some have stated that under these circumstances *new* vessels are seen to be formed, but I think the idea is erroneous, and has arisen from the fact of the blood globules entering the minute vessels in greater numbers than previously, and thus, ramifications become conspicuous that in their usual condition were not perceptible.

We have next to glance at the *physiological* causes of determination, but of these we know very little, for we cannot tell why the arteries should dilate so much after being stimulated to slight contraction. We see that the dilatation may be the result of *heat* applied, and also the result of reaction after the application of *cold*, but we cannot understand why the same effects should be produced under the influence of *mental emotions*, or the contact of various local stimulants; there is no doubt that *nervous* influence has a share in the phenomena, but the mode of its operation is quite beyond our comprehension. Can we suppose the fibres of the vessels to become paralysed? There is a somewhat analogous instance in the case of the sphincter muscles where paralysis does occur in consequence of mental emotions, as fear, &c. Dr. Billings gives an ingenious theory upon this subject; he assumes that the contractility of muscular tissue is derived from the nerves, and that in the healthy and ordinary state there is enough nervous energy to supply the nerves themselves, and the muscular fibre also, but that when strong mental emotion is present, such as would cause determination, the influence is withdrawn from the muscles to the nerves themselves, and consequently paralysis of the former is produced. He applies the same principle in the explanation of the *arterial* enlargement, by supposing that they become dilated as soon as their contractile power is diminished or removed. However plausible this supposition may appear, it is founded upon an idea that is not at all generally believed to be correct, viz., that muscular contractility is derived from *nervous* influence—it is on the contrary regarded as an independent property. Hunter called the enlargement of the vessels "*active dilatation*," but this throws no light upon the subject, nor yet does Kaltenbrunner's term of "*vital turgescence*." Another suggestion is that of Dr. Alison, viz., that there is some increase of *attraction* between

the blood globules and the vessels; this cannot possibly be admitted without much more satisfactory evidence than has, at present, been brought forward.

We are obliged to confess that hitherto the *proximate* cause of determination has not been ascertained.

When an unusual determination takes place to *one* part, there is a diminished supply of blood to *other* parts, especially to those furnished by the same arterial trunk, and the action of the heart must be engrossed chiefly by the dilated vessels, instead of being distributed equally to *all* portions of the vascular system. We have an example of this fact in the chilliness of the surface of the body during the process of digestion in persons whose circulation is languid, the blood being determined to the vessels of the stomach; the same subjects suffer from heat in the head, and coldness in the extremities, on going into a hot room. Attacks of local determination are frequently accompanied by shivering, diminution of the secretions, &c.—this is particularly the case in determination of blood to the head. It is upon this principle that the treatment of revulsion or derivation is founded, which consists in enlarging vessels at a distance from the seat of determination, so that the blood is drawn as it were from the vessels that were morbidly affected. Various stimulating substances have this effect of deriving blood, such as blisters, purgatives, heat, dry cupping, &c.; counter-irritation is only a part of their action—the greatest importance attaches to the *derivation*, as seen in the influence of hot pediluvia, which may prevent determination to the head or other parts.

We have seen that local determination may exist *without* any increase in the action of the heart, but, if the determination continues long, reaction or general excitement *will* most probably be produced. We do not know exactly *how* the heart is excited; the common opinion is that the irritation is propagated from the affected part back to the heart. Why the same cause that gives rise to *dilatation* of the arteries should produce *contraction* of the heart we cannot tell.

There are many instances of increased pulsation in some arteries, with diminished action in others; thus the abdominal aorta may beat strongly while the pulsation in the radial artery is very weak, and the heart itself contracting with only its usual strength. This augmented aortic pulsation has been noticed in connection with hæmorrhage from the alimentary canal, also in some cases of dyspepsia. Dr. Stokes considers it as one of the symptoms of gastritis.

The *effects* of determination are an increase in the functions and secretions of the part; the changes may, as we have before seen, be perfectly compatible with health, as in the breast, uterus, testicle, &c., but if the determination proceeds beyond the healthy limits, the functions will become *altered*, and not merely *increased*. The parts most liable to suffer from disordered secretion are those which, under ordinary circumstances, receive a large quantity of blood, as parenchymatous glands, &c.; thus the kidney is a very common seat of the perversion. The liver is not so much affected by determination and its results, because it is supplied chiefly by venous blood. Many persons are especially prone to increased determination of blood to the *head*, the symptoms of which may be considerably varied; in one case there may be *dulness* of the senses and mental faculties, with a tendency to coma, evidently implying diminished action. In another case there may be *increased* sensibility, rapid ideas, flashes of light before the eyes, disturbed sleep, and the like, shewing that instead of the brain being, as in the first case, passively congested, its vessels are receiving a more free and rapid supply of blood than in the normal condition. Sometimes these states of the circulation may be *mixed*, and a greater amount of

* Although the contraction and subsequent dilatation thus described, have been noticed by many observers, there are others who do not by any means admit them as established facts, but think the alteration in calibre is to a great extent imaginary.—Ed.

pressure be exerted upon one part of the brain than on another, so that hemiplegia may be produced. The *mucous membranes* are very subject to determination; in the stomach it causes pyrosis, gastralgia, &c.; in the bronchi it causes cough—the increase of secretion is regarded as the least unfavourable result. In many cases *permanent congestion* may occur, and the coats of the capillaries become altered, and then either the blood may transude, constituting hæmorrhage; or, 2ndly, only the watery parts of the blood may escape, producing *flux*; or, 3rdly, if neither of these consequences follow, *inflammation* is almost certain to supervene.

The treatment of determination would appear to be exceedingly simple. If too much blood is sent to a part, we should conclude that by abstracting a portion of it from such part, we should remedy the evil, but this is not aiming at the root, for the *enlarged state* of the arteries may remain; still it may be advisable to withdraw a little blood for the sake of obtaining temporary relief, especially if there should be general plethora. *Cold* applications to the affected vessels are of great use; they constringe the congested vessels themselves, and also those leading to them. The application of *heat* to parts at a distance is also of essential benefit. Purgatives are frequently very efficacious in removing determination to the abdominal viscera. Another remedy of service in equalizing the circulation is *antimony*. The same means that are useful in preventing congestion, are also useful in preventing determination, such as cold bathing, tonics, &c.; the secretions must be most carefully attended to.

We shall now proceed to the consideration of hæmorrhage, or the escape of blood from its proper and natural situations: it is generally caused by plethora, congestion, and determination. If plethora be the cause, the hæmorrhage will be *active* or *passive*, according as the plethora is of the *sthenic* or *asthenic* character. The conditions giving rise to hæmorrhage are very numerous—thus, congestion of the lungs, in consequence of obstructive disease of the valves of the left side of the heart, is a frequent cause of pulmonary hæmorrhage, or hæmoptysis; it may also be produced by the obstruction occasioned by tubercles in the pulmonary texture. Hæmorrhage from the intestinal canal, as hæmatemesis, melæna, and hæmorrhoids, may arise from obstruction to the portal circulation, in consequence of diseased liver, as cirrhosis, &c. Hæmorrhage from the brain may be caused by the wearing of tight cravats, hæmoptysis by defective form of the chest, or the pressure of tumours. Hæmorrhage may arise also from *gravitation*, as epistaxis (bleeding of the nose) from stooping; menorrhagia is much promoted by too long standing. Congestion renders the uterus liable to passive hæmorrhage.

Hæmorrhage may also be caused by *intropulsion* of blood, also by heat, atony of the vessels, as in purpura; plethora is a common cause, as in suppressed menstruation, cessation of hæmorrhoids, &c. Epistaxis frequently occurs in young persons at the time that growth is about to cease; in this case the discharge of blood arises from irritation and determination. All the causes I have enumerated may be referred either to plethora, congestion, or determination, but there must be still a further condition present before the blood can leave the vessels, and this condition must be an alteration in the state of the *vessels* themselves, or else in the *blood* contained in them. Sometimes the *vessels* are found to be diseased, their coats lose their tenacity and elasticity, in consequence of the deposit in them of ossific or atheromatous matter, and hence, instead of yielding to the pressure of the blood, as in the healthy state, they become *ruptured*, and the circulating fluid of course escapes; this condition of the vessels not uncommonly exists in the brain, and is the cause of apoplexy. It is probable that the vessels of the lungs are sometimes rendered fragile by the presence of tuberculous deposits, and thus hæmoptysis produced. I believe, indeed, that hæmoptysis is caused, in nine cases out of ten, by the existence of tuberculous disease in some form or other. In some instances of uterine hæmorrhage the vessels have been found completely ulcerated in connection with cancerous

disease. Sometimes the vessels of a part may be ruptured simply from mechanical causes, without any actual changes being discovered in their constituents, thus hæmaturia, or bloody urine, may be the result of violence applied to the loins, or of sudden or excessive straining. So also apoplexy may arise from rupture, in consequence of the forcible pumping of the blood from a diseased heart.

Sometimes, again, there is not only no *disease* of the vessels found, but even no *rupture* whatever can be detected, and the only explanation we can offer of the hæmorrhage in such cases is, that the blood has *transuded* through the coats: an analogous fact has been observed with regard to the catamenia, for the menstrual fluid has been seen to perspire, as it were, through the vessels of the uterus. There are also instances on record of the blood having escaped through the skin of the axilla, and elsewhere, without any breach in the continuity of the vessels being discoverable. It is perfectly reasonable to conclude that hæmorrhage may occur in a precisely similar way from the *internal surfaces* of the body—as the lungs, stomach, and intestines. In many cases no alteration in the condition of the blood can be detected, and we must suppose that the *vessels* undergo a change,—viz., a *dilatation* of their pores. Most hæmorrhages are preceded by febrile excitement of the system, increased action of the heart, and augmented secretion, indicating the existence of what is called the "*Molimen Hæmorrhagicum*." It is by no means uncommon to find various hæmorrhages *vicarious*; thus hæmoptysis and hæmatemesis may alternate, or either of them may be vicarious of menstruation; sometimes the latter function has been supplied by a transudation of blood from the axilla, nipples, &c. Another somewhat peculiar feature in hæmorrhages is, that they are occasionally *periodical*, and soon become so far *constitutional* as to be essential to the well being and comfort of the system.

LECTURES ON CHEMISTRY.

By JOHN SCOFFERN, M.D., Lecturer on Chemistry, at the Aldersgate School of Medicine.

WE now arrive at the consideration of electricity as a natural agent. The phenomena of thunder, and lightning afford the most prominent examples of its exercise, and the aurora borealis, and falling stars, together with water spouts, are almost proved to depend upon the same agent. The first questions, presenting themselves, in an investigation of these phenomena,—are, whence comes the electricity to which such vast effects are attributable? What are its sources?—how developed?

The answer to this question will not be difficult. It is true that we have hitherto seen,—friction,—as the only excitant of electrical action, but there also exist other means almost equally efficacious, so far as regards their principle, although the application of that principle may be more difficult. It will be hereafter seen as we proceed with our studies that the operations, termed *chemical*, are one fertile source of electrical excitation;—indeed they are taken advantage of as such, and extensively applied. Now, in the grand laboratory of nature, innumerable chemical changes are continually taking place on a scale of the grandest possible magnitude. One of the most important is evaporation, and to this source, I imagine, must we attribute, almost exclusively, that electrical excitation, which yields the phenomena of thunder and lightning. In order to prove that the operation of evaporating a fluid may develop electrical excitement, I take a little metallic vessel, containing some water, this I place upon the conducting plate of an electrometer, and throw into it a piece of burning coal. Evaporation of the water immediately results, and the gold leaves diverge. When we consider the enormous amount of fluid continually evaporating; the immense surface of material thus produced in the state of cloud, and capable of receiving electrical excitement, we need not wonder at the terrific grandeur of the results. The discovery that the phenomena of thunder and lightning, depended upon electricity, was made by the celebrated Benjamin Franklin, at Philadelphia, in the year 1792. Other persons, however, had imagined the same thing. Mr. Grey and Dr. Wall, at an early

period of electrical science, suggested the analogy between a flash of lightning and an electric spark.—Subsequently, the Abbé Nollet, hinted more precisely at the same thing. Indeed, after reading his speculations on the subject, it appears extraordinary that he did not put them to the test of experiment. "If any one," he remarks, "should take upon him to prove, from a well connected comparison of phenomena, that thunder is in the hands of nature what electricity is in ours—that the wonders we exhibit at pleasure are small imitations of those great effects which alarm us, and that the whole depends upon the same kind of mechanism; should it be shown that a cloud, formed by the action of winds, by heats, or by a mixture of various exhalations, is when opposite to a terrestrial object, as an electrified body, when at a certain distance from one that is not electrified, I confess such an idea, if well supported, would afford me infinite pleasure, and that it may be supported by many plausible arguments is obvious to any one well versed in the history of electrical phenomena. The universality of the electric matter, the rapidity of its action, its heat, and its activity in inflaming other bodies; its property in striking them externally and internally, even to their smallest parts;—the remarkable instances we have of this effect in the Leyden experiment; the notion which may be legitimately adopted of the effects that might be supposed to arise from a much greater accumulation of electric power: these, and many other points of analogy, which I have for some time meditated upon, almost induce me to believe, that in taking electricity as a foundation one might form much more perfect and plausible hypotheses, respecting the origin of thunder and lightning than any which have hitherto been suggested." This long quotation will prove to you the views entertained by the Abbé Nollet relative to this subject. They are extraordinarily accurate, considering them to have arisen from mere speculation, apart from all experiments. The celebrated American politician and natural philosopher, Franklin, was led to form the same opinions, which he determined subjecting to the test of experiment. In order to carry out his views he awaited the erection of a tall spire in Philadelphia; but, at length, the beautifully simple expedient occurred to him of attaching a fragment of pointed metal to a boy's kite, flying it aloft, and thus forming a lightning conductor, of indefinite height. Having prepared his apparatus he awaited the next thunder storm to test its efficacy, but doubtful of success; and fearing the ridicule which would attach to him, in case of failure, he communicated the project to his son alone. Two or three clouds passed over his kite without yielding any manifestations of electricity, and the philosopher began to despair of success when directing his eye towards the cord, he saw its fibres project in all directions (a proof of electrical excitement); and on placing his knuckle to a key previously attached to the cord, he drew from it a spark. The experiment was soon verified in France and other places. M. de Romas repeated it on a very large scale: having constructed a kite seven feet high, and three wide, he raised it to the height of 500 feet, by a string, through which was passed a very fine wire. From this wire were obtained streams of light, an inch in diameter, and ten feet long. Considering how frequently Nature's large magazine of electricity were ransacked, by those who repeated Franklin's experiments, it is wonderful, that they escaped for the most part with such impunity. Professor Richman, of St. Petersburg, however, was struck dead by a flash of natural electricity, proceeding from an iron bar, which he had erected for the purpose of experiment.

Franklin, and those who immediately followed him, spoke of metallic rods *attracting* electricity, and suggested that buildings should be protected against the ill effects of lightning by supplying them with metallic rods, projecting at one extremity far above them, and sinking at the other, deep into the ground. The theory of lightning being attracted by such contrivances, is altogether fallacious. It is no more attracted, than water can be said to be attracted by the bed of a ravine; yet the efficacy of such lightning-conductors, in opening a way for electrical excitation,

is not the less certain. Care should be taken that they remain well pointed; and as iron, when exposed to air and moisture, rapidly oxydises, thus destroying the point, it is advisable to form the very extremity of the rod of either gold or platinum. The lower end should be buried some feet in the ground, or, if possible, should be made to communicate with a collection of water. We find that a very small metallic wire may be burned by passing through it a strong electrical current; and not infrequently do we hear of bell-wires being fused, and burned by lightning. These facts admonish us to form lightning-conductors of a sufficient diameter to permit their giving passage to enormous charges of electricity with facility. The conductor ought not to possess a diameter of less than half-an-inch. On the land, where objects projecting aloft are so numerous, the atmospheric electricity is placed under circumstances of much more easy dispersion than at sea, and hence it is that ships, when in the vicinity of a thunder-cloud, are in such imminent danger. The peculiarities of the masts of a ship, and the necessity for raising and lowering them to different elevations, render it a matter of some little difficulty to supply them with fixed lightning-conductors. Hence, until lately, the plan was universal (when marine lightning-conductors were used at all) to have them in the form of a chain, and elevate them during a storm. Nothing could be more inefficient, or more dangerous, than this. Inefficient, because they could not be always elevated as soon as required, (and, even then, a chain is inferior to a bar),—dangerous, because the lightning would frequently kill those who were employed to fix them. Lately, however, Mr. Snow Harris, of Plymouth, has invented a continuous-lightning-conductor for ships, fastened permanently to the mast, and by a peculiar contrivance, so that the mast may be elevated or lowered at pleasure, without obstructing the communication in the least degree.

In order to avoid an injury by lightning, the best plan is to lie prostrate on the ground. To remain under a tree, or in contact with a high building, is not safe, but the vicinity of such elevated objects may be selected with propriety. It is, moreover, exceedingly unsafe to stand in the neighbourhood of large collections of water; but the person who would submit to being enveloped by water (respiration being provided for) might consider himself beyond all danger from lightning. The reason for all this is perfectly obvious. In a house, the best preservative means would be,—to envelope oneself in badly-conducting materials, such as blankets, carpets, and the like. We have no term expressive of the exceedingly minute duration of light from the electric discharge. To speak of it as instantaneous is almost an absurdity, seeing that an instant is, in comparison, a little age. This peculiarity of electrical light develops some curious phenomena in connexion with bodies rapidly moving. You are all aware that a transverse bar may be caused to revolve so rapidly that it shall appear like a circle at rest—this may be exemplified very easily, by the fly-regulator of a musical snuff-box. This appearance is yielded owing to a series of different positions which the bar assumes, coming under our eye at different periods of time, and is necessarily connected with a duration of the luminous rays, which render it visible for an appreciable length of time. If the light be reduced to a period inconceivably brief, then theory indicates that the bar should seem at rest, which is precisely the case when viewed by the electric flash. Again, it is well known, that the primitive colours of the prismatic spectrum, if brought rapidly in succession under the eye, will convey the impression of white. If, however, a flash of lightning be the source of illumination, each colour will be distinctly seen, and perfectly at rest!

The rapidity with which electricity traverses good conductors is so enormous, that the mind is totally incompetent to invest it with a corresponding idea. Early experimenters failed to detect any sensible period of transmission, and almost went the length of supposing a motion to occur apart from time. Professor Wheatstone however has shewn, by a very ingenious contrivance, that, through copper-wire, electricity passes at the rate

of 576,000 miles a second, provided we recognize the existence of only one fluid, or direction of progression,—and at half that rate, or 288,000 miles per second, provided there exist two fluids, or directions of progression. The mind vainly tries to shape even this lesser velocity into a corresponding idea.

I regret not being able to convey such a clear notion as I would desire, of the means to which Professor Wheatstone had recourse to make this beautiful demonstration. Perhaps, however, I may succeed in conveying to you some slight idea. He wound a great quantity of copper wire around a wooden frame, and made breaks or interruptions in the wire at certain intervals. Now consider these relations, and the result of passing an electric discharge along the wire. It is evident that at every break there would be a spark, and as the breaks are successive, so, theoretically, the sparks ought to be successive. Wheatstone demonstrated such to be the case. On an axis, which might be rapidly revolved, and parallel to it, he fixed a plane mirror, in such a position that it should be capable of reflecting the electric sparks just mentioned. Such a mirror, when at rest, would of course reflect the sparks just as they might appear to the eyes; but when put into rapid motion, the sparks, if not occurring *exactly* at the same time, would be caught by the whirling mirror in the order of their development, and thrown, on the opposed screen, in a spectrum more or less elongated according to the rapidity of their succession. This was actually discovered to result, and the length of the spectrums, together with the velocity of the mirror, being known, data were supplied for calculating the rate of electrical transmission! In the philosophical transactions for 1834, p. 509 these beautiful experiments of Professor Wheatstone, are given in detail, together with accompanying and illustrative diagrams.

ERRATA in last lecture—page 307, col. 1, line 2 from bottom, for most principal read most prominent—col. 3, line 42, for atomic peculiarities read polarities.

REMARKS ON THE NATURE AND PROPERTIES OF SECALE CORNUTUM.

By CHARLES CLAY, Member of the Royal College of Physicians, London, &c., and Lecturer on Medical Jurisprudence, &c. Manchester.

It would be impossible within the usual limits of a journal communication to enter largely into all that has been written on the nature and properties of the secale cornutum as an article of the materia medica, particularly as to its use in promoting uterine contraction, this being the most general object of its exhibition, notwithstanding it has powers of no mean order suited to a variety of purposes, which I intend briefly to hint at before I conclude these remarks. So much has been written of late years on this particular subject, that it might appear in a great measure unnecessary for me to dwell upon it; certainly, I shall study more to condense the present essay into a retrospect of what has been done, (including my own observations,) rather than specify at full length all the inquiries that have been set on foot respecting it. The importance of the subject, however, and the very general use now made of the secale cornutum, are sufficient apologies for the intrusion of my remarks, which I trust will be found practically useful; and, when I consider that too many facts cannot be advanced, as they may tend to justify some practitioners in their extensive application of the secale cornutum, and at the same time remove the prejudices of others that may have too hastily condemned the use of it altogether,—when I state that few have had the opportunity of testing the merits of the secale cornutum so extensively as myself, that I was one of the earliest British practitioners to try its effects, (having recorded cases in which it was

successful in the medical journals of 1823 and 1824,) since which I have investigated the application of the secale in not less than a thousand instances; my remarks, therefore, may be fairly presumed to have been founded on practical experience.

One or two general observations may be necessary before I proceed to a minuter detail, the correctness of which will, I feel confident, be allowed by every person who has had extensive opportunities of observation on this subject. First, *that if the secale cornutum be well selected, freed from impurities, and within the year after its growth, a more certain means does not exist in the whole range of the materia medica to produce the effects for which it is given, provided the case selected for its application be a proper one.* Secondly, taking into account the specimens of this drug as offered for sale generally, with its peculiarly rapid tendency to change effected by time, the remarkable perishability of some of its powers, (effected by those changes) particularly those for which it is mostly given and the retention of others of a diametrically opposite character, furnishing strong arguments against its use, would warrant the conclusion—*that a more uncertain application as a remedy does not exist in the materia medica.*

I might also add, the eagerness of junior practitioners to avail themselves too generally of its application without due regard to the selection of cases best adapted to its powers (which is decidedly and imperatively necessary to secure a successful result) has been the means of bringing the secale cornutum into unmerited disrepute, and prevented to a considerable extent its trial by those who have had ample opportunities of doing it full justice and placing its merits on a proper basis.

The secale cornutum commonly sold (with very few exceptions indeed) is the growth of different years, even up to the third and fourth mixed together, and not unfrequently blended with ergotized matter of other graminee; the spurs hard and brittle, breaking unequally, internally of a dirty white colour, the cuticle of a brownish tint, with transverse cracks on the concave curve, little or no smell, and frequently much eaten by small mites commencing their attacks at the extremities of the spurs, having the appearance of a dry powder; the whole has a dry shrivelled character. On the contrary, good secale cornutum is easily known with a little attention, by its sickly sweet (but far from unpleasant) smell, by the length, plumpness, and purple blackness of the spur, very slightly curved, without transverse cracks, of a soft elastic feel, rather moist and glutinous, when bent to an acute angle the spur snaps asunder with a straight transverse fracture, internally shewing a rich delicate cream colour with a purple tint round the line of the cuticle, and finely pencilled streaks of the same colour penetrating the substance within in a direction from the edge to the centre, perfectly free from insects or any appearance of their depredations, and lastly, the spurs should be nearly uniform in size, none less than one inch in length and moderately thick.

Bad specimens of the secale are of variable sizes, independent of the other characteristics I have already given, probably mixed with the heads of other graminee ergotized of a smaller size, which though there is a probability their properties may be analogous, yet, from the comparatively trifling power of the smaller spurs, I am inclined to think none so valuable as the ergotized rye. Druggists are in the habit of stoving the secale cornutum to destroy the attacking insects, and then by moistening it with molasses water the colour, adhesive and moist feeling are restored; but it is evident (as I shall afterwards endeavour to prove) that such specimens, as stimulants, are almost entirely inert. It is of great consequence to distinguish the good from the bad, as on such judgment solely depends the success of its exhibition.

There are two distinct properties very different from each other existing in the fresh secale cornutum, of which I have been aware many years. One of which, and that is the stimulant power, is nearly dissipated in about a year after its growth; the

other property is a narcotic poison, which continues connected with the secale cornutum after the stimulant property has left it. If, therefore, the fresh secale be given in *substance*, both the stimulant and narcotic influences are exerted; if an old specimen be given in *substance*, the narcotic principle only is exerted, because the stimulant powers have long been dissipated before its use. It becomes therefore as a stimulant altogether inert, but produces effects decidedly injurious, as I shall shortly show. At the time when the secale cornutum was first introduced to the profession it fetched a high price, and then it was not difficult to obtain a good specimen; but when the demand became more general, the cupidity of tradesmen began to be exercised to a considerable extent, encouraged by the fondness of purchasing cheap articles, which has been the means of entailing a bad article on the profession for general use. When first my attention was directed to the use of the secale cornutum (that is in 1823 and 24,) I soon felt convinced that some of the plans of exhibiting it failed in producing the desired effects; that, therefore, they were not only useless but positively injurious, inasmuch as effects being produced very different from those contemplated by the exhibitor, and of a very opposite character, often producing unexpected deleterious and even fatal results, without the slightest good being effected. After many experiments, I found the fresh made decoction, given as soon as made, the most certain of securing the principles for which it was given, and its use in that form never disappointed me as to the result—secured too without those deleterious effects attached to other modes of exhibition. As an example, the tincture, however carefully made, and by whatever means prepared, does not appear to have that peculiar stimulant power, that either the substance in powder, or the decoction of the fresh secale has, but more of a general stimulant effect, such as would arise from taking a glass of spirituous liquors, and, therefore, not only often inefficient, but highly objectionable. Again, when the secale is given in substance, supposing it to be of the best possible quality, its powers, as a local stimulant, will be secured, but it will be at the expense of having present a narcotic principle of considerable power, often injurious to the child, producing asphyxia and its consequences, and, therefore, in all probability, injurious to the parent. And, lastly, if the secale happened to be inferior (that is, old), and given in substance; the narcotic effect was more decided, and the stimulant power almost, if not entirely, absent; in consequence of which, the probability of asphyxia (and its consequences) is increased by the length of time the fetus remains under its influence, having no stimulant power to eject it.

From oft repeated trials I, therefore, concluded that the decoction of the secale cornutum possessed all the specific powers as a local stimulant without being capable of holding in solution those narcotic powers so objectionable to its use. It is true, these latter effects are not to any very great extent on the mother, merely because the dose used is generally too small to produce it, but we cannot be mistaken as to the child, and, therefore, analogous reasoning would prove it deleterious to the parent, though in a less degree, a circumstance hitherto not noticed as it ought to be, by medical men. The circumstance of the secale cornutum producing a state of asphyxia on the child often fatal, did not at first particularly arrest my attention, although I recollected some cases that had occurred to me in my early trials of the comparative value of the different preparations of the secale, the result of which was the determination to use the decoction, since the adoption of which, I could not trace one case of asphyxia as having occurred where it was given in that form, though I had some seven or eight years practice to refer to at the time. About this period (viz. about 1830 and 31), communications from one or two medical friends were forwarded to me directing my attention to this particular point, requesting my opinion, knowing that I had had extensive opportunities of testing it; the general question put to me was, "*Had I observed that asphyxia of the child at birth had been more prevalent since the introduction of the secale cornutum into practice than before?*" Speaking generally from my own experience since I adopted the preference of

the decoction for exhibition, my reply was decidedly in the negative. But when I called to mind my early experiments, and knowing that up to the present time it is given by practitioners in medicine in all its forms, I felt no doubt there was more ground for the enquiry than I first imagined, and, therefore, determined to ascertain the truth as far as it lay in my power. During the following eighteen months I selected sixty cases for experiment; in the first twenty I gave the secale cornutum in substance in the form of powder, in which I had three cases of asphyxia, one fatal. In the next twenty cases I exhibited the tincture of the secale cornutum, in which there were no cases of asphyxia. In about seven of the cases it proved ineffective, producing a general excitement, which went off without effecting the desired object. In the remainder, delivery was accomplished during its influence, but neither as rapidly nor as effectively as I could have wished, and almost all the cases were accompanied with more or less of general excitement which seemed to depreciate its powers on particular organs; this I attributed to the alcoholic menstruum being exactly similar to the annoyance obstetric practitioners are often exposed to, by nurses smuggling into their patients, glasses of spirituous liquors. The last twenty cases were treated by the decoction, no cases of asphyxia occurred, no general excitement, or at least very trifling, all the cases terminated within half an hour of its being taken. I felt it my duty not to push these experiments further, being convinced the decoction did not take up into solution those active narcotic properties known to exist in the secale cornutum, the effects of which are abundantly proved by the exhibition in substance. I also rejected the tincture, as being too much of a general stimulant, and, therefore, less disposed to act on the uterus, particularly with the undeniably specific action of the decoction. Having obtained these results from experiments, from that time to the present, I have used the decoction solely, and have never had a case of asphyxia from its exhibition since. I did not rest, however, on my own conclusions; in my correspondence with medical friends, I found similar results, which were more decisive when their attention was directly pointed to the matter of inquiry. The form of giving the secale cornutum, being, therefore, settled in my mind, the extent to which it might be given, and the strength of the decoction came next under consideration; the formula I have been in the habit of using for the last ten years, has been four scruples of the secale cornutum to eight ounces of water boiled down to six ounces; this forms two doses, one is given immediately after it is made, as warm as convenient, and the second dose, if required, after an interval of fifteen minutes. I have rarely found it necessary to go beyond a second dose, the general average result is, delivery in from twenty-five minutes to half an hour, after the first dose. As a general rule, if the second dose does not accomplish delivery, there is every reason to suppose the case not to have been properly selected. With respect to the decoction, it is very perishable, I have known it bad in two hours after being made; hence the necessity of making it when wanted. It is also necessary to have the vessels in which it is made very clean, the slightest portion of grease seems to prevent the water from taking up the stimulant properties as effectively as otherwise, and, therefore, depreciates it as a remedy. This remedy is only applicable to a certain class of cases; the impatience of some practitioners, together with the wish of others, to attribute to it powers of application too general, have been the means of bringing it into disrepute; for, if given indiscriminately it will often, instead of facilitating the process of labour, retard it, and produce many other unpleasant symptoms. The obstetrician will not husband his time to advantage by the general application of the secale cornutum, but by a careful selection of the cases to which it is applicable. Where there is great general debility, prostration of strength, almost an entire absence of uterine efforts, or those efforts very weak, with considerable dilatation of the os uteri, the edges of which should not be thick and rigid, but thin and yielding, such a case is calculated to be benefitted almost to a certainty by the secale cornutum.

(To be continued.)

RECOLLECTIONS OF PARISIAN HOSPITALS.

By J. NOTTINGHAM, Esq., Surgeon.

A CASE of retention of urine, in a man aged 74 years, was admitted at the Hotel Dieu. Many surgeons in Paris had failed in their attempts to pass the catheter in this case: M. Breschet did succeed in a first trial, but failed in a second. M. Dupuytren remarked that it was one of those cases where the surgeon ought to keep the point or extremity of the catheter close upon the superior part of the inside of the urethra, to avoid the false passages and obstacles which are nearly always found in connection with the inferior aspect of the canal. In the clinical remarks upon this old man's complaints, made by M. Dupuytren, the disease of the urethra is only noticed in a cursory manner, for it was found that an extraordinary affection of the hip-joints was present, to which attention was more particularly directed.

It was evident at first sight that the thigh bones were dislocated—there was marked prominence of the hips, and the patient could not widely separate his thighs. The malformation being found on both sides, indicated the probability of its being congenital. The patient afterwards died of the disease of the urethra, and a very careful examination of the body was made: it was found impossible to separate the thighs to any considerable distance, except by allowing the feet to take a wide sweep, or to move through a considerable arc of a circle: the trochanter were higher and nearer to the crista of the ilium than natural, and the head of the femur was more elevated; the knees directed more inwards, and the thighs shorter than usual; there was, indeed, a complete change of relations, and marked alteration both in direction and length. The acetabulum was obliterated, and the head of the bone deformed. The superior part of the thigh was enlarged, the body bent backwards, the abdomen carried forwards; the pelvis, instead of being obliquely placed, was nearly in a transverse position; the thighs shortened; the nates soft and lax, dependent on the approximation of the insertions to the origins of the glutei, and on the state of relaxation of these muscles. The gluteus medius was, on the contrary, distended and raised; the gluteus minimus destroyed; the pyramidalis, instead of being obliquely placed, as in the normal state, was found in a horizontal direction; the gemelli and quadratus femoris muscles were distended; the adductors were shortened.

On the left side the remains of the cotyloid cavity did not measure more than an inch in diameter in its broadest part, it was shallow, irregular, and filled with a yellowish semi-fluid material, more or less like oil; its form was oval. On the dorsum of the ilium, anterior to the upper part of the ischiatric notch, was found a broad, but not deep depression, covered by a thick periosteum, glistening in its appearance, and approximating in its aspect to that of articular cartilage; this depression had received the head of the femur, which was less than natural, flattened, and irregular, without any vestige of the insertion of the ligamentum teres, and coated with articular cartilage, which was thinner than what is found in the normal state. The capsular ligament of the hip-joint formed a complete bag, attached around the malformed acetabulum, but more firmly to its superior and inferior border. This bag appeared to be a sort of substitute for a perfect acetabulum, and by its length allowed of the ascent of the head of the femur into the depression previously noticed—in this way, the head of the bone having a range of about three inches. The thickness of this bag was very considerable; its density almost cartilaginous.

On the right side, the acetabulum was a little larger; the aspect of its interior was nearly the same as in that of the other side. Here was found, on the ilium, in a situation nearly corresponding to that of the depression on the other side, not a mere depression, but something which might better be called a false acetabulum; a large and deep cavity, with an osseous border, strongly

marked, rough, and irregular. The head of the femur was larger than that of the opposite side, and had more of its natural form; like the other, it was also coated with an imperfect articular cartilage, and both joints were supplied with a synovial membrane. The capsular ligament was not so thick as on the left side, although it was not confined to the circumference of the anormal cavity. But on this side the head of the femur pushed against the bony margin of the cavity into which it was received, met there with a solid *point d'appui*,—while, on the left side, the ascent of the head of the bone was only limited by the great strength of the fibrous capsule, and the resistance it offered to the weight of the body.

Besides the alterations above-mentioned, there was found an extraordinary mobility of the articulation of the sacrum with the last vertebra of the loins; by pressing upon one of the lower extremities, and at the same time fixing the pelvis, the vertebral column moved through a space of nearly a foot in extent. Relaxation of the cartilage appeared to be the cause of this singular mobility.

M. Dupuytren remarked that opportunities of studying the nature of this curious dislocation, in the dead subject, are exceedingly rare; for as it is not accompanied by any grave suffering, and constitutes merely an infirmity incapable of destroying life, we have only been enabled to investigate it in a small number of individuals who died of diseases in no way connected with the peculiar condition of the hip. I have remarked, continues M. D., that the muscles attached above and below the cotyloid cavity have all mounted, or have been drawn towards the crista of the ilium. Amongst these muscles some have received a remarkable development, and others are less than natural, and apparently in a state of atrophy; the former are those which have preserved their action; the muscles of the second set are those whose actions have been restrained or prevented by the changes which take place in the position and form of the parts. Some muscles of the latter class are reduced to a sort of yellow fibrous tissue, in which the eye seeks in vain to recognize true muscular structure.

The upper part of the femur preserves in all its parts its natural forms, dimensions, and relations, only we occasionally find that the internal and anterior aspect of the head of the bone has lost a little of its rounded form, which is apparently the result of friction against the parts which were not organized for its reception. The cotyloid cavity is either altogether wanting, or in its place we merely find as a vestige or rudiment, a small and irregular bony projection, often with no trace of diarthrodial cartilage, synovial, or other capsule, or any fibrous border, but surrounded by resisting cellular tissue, and covered by the muscles which go to be inserted into the lesser trochanter. Once, in two or three subjects, I have found the ligamentum teres much lengthened, flattened superiorly, and as if worn at certain points by the pressure and rubbing of the head of the thigh-bone, which part is found lodged in a cavity somewhat analogous to that which is formed in cases of unreduced dislocation of the ordinary kind, or the result of accident, and where the head of the bone is driven upon the dorsum of the ilium. This new cavity, very superficial, and nearly without margin, is situated above and behind the acetabulum, at an elevation proportioned to the shortening of the limb, or to the ascent of the head of the femur which is essentially the same. In short, we find in these cases appearances similar to those which are met with in instances of spontaneous luxation, or in those of old dislocations, the result of external violence,—with this difference, that, in such individuals as are the object of these investigations, every thing connected with the changes here noticed seems to date from a very early period of life, or to have been thus disposed originally.

This original or congenital displacement of the head of the thigh-bones, of which we have traced the anatomical characters, has not been noticed by French writers. The observation of it was suggested to me by the history of the individual named Dautun, about whom a few remarks will be made in this lecture. In calling your attention to this matter, it was not my wish to swell the catalogue, already too long, of the sufferings of the

human race, but to caution practitioners against great errors of judgment, or diagnosis, and to guard patients against modes of treatment which are not only useless but dangerous. This alteration, then, consists in a transposition of the head of the femur from the cotyloid cavity to the part previously indicated on the dorsum of the ilium,—a transposition which is observed from the time of birth, and which appears to depend more upon the absence of a deep and complete acetabulum than upon any accident or disease. This displacement is of the same kind as those observed in dislocations of the femur upwards and outwards. Two varieties of this affection are already known, the accidental and the consecutive, spontaneous or symptomatic. Hence, for the sake of distinction, we have given to the dislocation now treated of, the name of *original luxation*.

Second Case.—The patient named Joseph Paquier, a man of 49 years of age, a weaver by trade, entered the Hotel Dieu on the 21st June, 1831, to be treated for chronic ophthalmia, with which he had been afflicted from his infancy. From time to time this complaint was aggravated by any irregularity in his mode of life, and it was on account of one of these exacerbations, that he recently came into the hospital. Venesection, a blister applied to the right arm, sinapisms to the feet, and purgative glysters, sufficed to remedy this attack in less than a fortnight. The patient being about to leave the hospital, asked for a bandage, to support a large inguinal hernia which filled the scrotum, and for which he had hitherto used no other retentive apparatus. It was requisite to ascertain the existence, the size, and the degree of reducibility of this hernia. In proceeding to this examination, M. Dupuytren was not a little surprised at the state in which he found the upper extremities of the thigh bones, for the head of each was found, not in the cotyloid cavity, but on the dorsum of the ilium. This transposition was characterised by shortening of the lower limbs, mounting of the heads of the thigh bones upon the dorsum of the ilium, projection of the great trochanters, and retraction of the muscles of the nates, towards the crista of the ilium, on both sides, &c. &c. The disproportion between the superior and inferior parts of the body was very remarkable; the trunk was well developed, while the lower limbs were short and small, and appeared so especially when viewed in connection with the pelvis, the development of which had in no way suffered in connection with all that had occurred on its external surface. In the upright posture the upper part of the trunk was bent back, the pelvis was horizontally placed on the thigh bones, and the patient only touched the ground with his toes. He could not mount a horse without great difficulty, and was obliged to make use of a chair: when mounted he was compelled to use very short stirrups, so as to have the knees on a level with the great trochanters, and to rest on the ischia, not being able to press the thighs against the sides of the horse. His walk was laborious and unsteady, and at each step the head of the femur which supported the weight of the body, could be seen to move upwards on the dorsum of the ilium, while the pelvis seemed to make a corresponding descent, a fact evidently depending on the want of fixity of the heads of the thigh bones, for the maintaining of which the patient used a kind of belt which served to clasp and hold these osseous extremities. Running was less tottering and laborious than walking. When the patient was placed horizontally on his back, the signs of his malady were less evident; in this position it was easy to lengthen or shorten the affected limbs by making traction upon them, or pushing them gently towards the pelvis. All these displacements and motions were effected without any pain, leaving no doubt of the absence of every kind of disease, (saving the malformation) as also of the want of cavities capable of receiving and retaining the heads of the thigh bones.

This patient came to the hospital on account of his ophthalmia, and requested that he might be dismissed as soon as the disease of his eyes was relieved. Like the former, he declared that he was born with this affection, and that his gait had always been as at present.

(To be continued.)

NEW EXPERIMENTS ON THE EFFECTS OF WATER DRINKING ON THE BLOOD OF MAN AND THE BRUTE CREATION.

(For the "Medical Times.")

[FROM an important work, just issued from the German press, entitled "On the Regeneration of Human Life," and written by the celebrated Berlin Professor Dr. C. H. Schultz.]

I was struck in former experiments on the fibrin of the blood, that, even after a complete separation from the globules, the fibrin was not completely colourless, but generally possessed a light yellowish tinge, which was derived from the chemical solution of a portion of colouring matter, by which I explained the origin of the green colour through indigo (vide my work on the Circulation, p. 75.) Amongst a great number of observations, it became apparent that the blood of different sorts of animals and individuals, and even of the same individual at different epochs, exhibited a marked distinction in that respect, that the colour of the fibrin was at times nearly imperceptible, at other times it exhibited different shades of yellow; nay, in animals perfectly healthy, it appeared orange, and even reddish. In all these cases, the serum after coagulation shewed the same colour as the fibrin, so much so that it was possible to judge from the colour of the serum of the colour of the fibrin in the living state. I soon arrived at the conclusion, that the cause of this variety of colours rested in the quantity of beverage which the animals had taken previous to the experiment. If the animals had drunk much, the fibrin, and subsequently the serum of the blood appeared of a dark yellow, or reddish yellow colour; if, on the contrary, they had not drunk previous to the experiment, it had but a light yellowish, or colourless appearance. I experimented then upon horses and oxen, which being kept a longer time without drink, the fibrin of the blood, drawn was almost without any colour. For the sake of certifying that it was only the fluids absorbed from the stomach of the animals into the blood, which caused these differences in colour, I undertook experiments of a different character, by which it became clear that the phenomena observed on a small scale, and by the aid of the microscope, take place also in the wider sphere of the whole living organism.

I took four glasses, of three ounces each, of which one remained empty, whilst I put in the second $\frac{1}{3}$, in the third $\frac{2}{3}$, and in the fourth $1\frac{1}{2}$ of water. After this, all the glasses were filled up with blood running from the opened vessel of a horse, and in the three glasses containing water, the blood was well mixed up with the latter; consequently the first glass contained pure blood, the second, blood with $\frac{1}{3}$ part of water, the third, blood with $\frac{2}{3}$ part of water, and the fourth, blood and water in equal proportions. The glasses were now kept quiet, for the sake of duly watching the changes that might take place. In the first glass, a strong precipitation of the globules from the fibrin (as is always the case) was soon perceptible; this appeared but very slightly in the second glass, and in the third and fourth nothing of the kind took place. After coagulation was completed, the blood in the first glass shewed a densely contracted and compact coagulum, and a great quantity ($\frac{1}{3}$) of serum; in the second glass the coagulum was less firm, occupied a larger space, on account of a less quantity of serum (about $\frac{1}{2}$ part) having been secreted; in the third glass the coagulum was very soft, and little contracted, so much so that scarcely $\frac{1}{3}$ part of serum had been secreted, and in the fourth glass the blood formed a nearly uniform jelly, in which fibrin and serum had been scarcely separated, so much so, that merely a very thin stratum of the latter floated on the surface. The most important, however, were the different colours of the fibrin and serum in the different glasses. The blood which had not been mixed with water shewed a somewhat yellowish coagulum and serum. In the blood mixed with $\frac{1}{3}$ of water, the small stratum of fibrin exhibited an orange colour; and after coagulation the serum had the same colour. The serum of the blood mixed with $\frac{2}{3}$ of water was of an intensely reddish colour, and lastly, the mixture of equal parts of blood and water exhibited such an intense solution of the colouring matter in the

coagulum, that the serum excreted therefrom had a nearly equal colour to the blood itself.

Similar experiments were also made with the blood of sheep, whence, however, it resulted, that their circulating medium is far more influenced by water, in respect to the solubility of the colouring matter of its globules, than either the blood of horses or oxen. An addition of $\frac{1}{2}$ of water to the blood of sheep, occasioned nearly as great a solution of the colouring matter as $\frac{1}{4}$ of water to the blood of oxen, which seems to arise from the greater aquosity of sheep's blood in relation to the lesser quantity of colouring matter. An addition of even 1-64th part of water to the blood of sheep occasioned a conspicuous redness of the serum. I repeated subsequently these experiments in the Veterinary Institution, with the co-operation of Professor HARTWIG, and made them in such a way that the additions of water to blood were made at once by per cents, beginning with such small quantities as $\frac{1}{2}$ to 1 per cent. of water. I took a greater number of glasses, each containing 100 \mathfrak{D} , in which I first put quantities of water from $\frac{1}{2}$, 1, 2, 4, 6, 8, 12, 16, 20 \mathfrak{D} , filled them up with blood of horses, and awaited the result. Even $\frac{1}{2}$ per cent. of water shewed a considerable dissolution of the colouring matter, which, however, did not become so much visible by the stronger colouring of the fibrin and serum, as by the globules becoming lighter by their losing the colouring matter, and not descending so much as in the natural state. By this greater or less gravity of the globules, even the smallest quantities of water may be recognised, compared with the action of the blood of the same animal in an unmixed state. An addition of 1 per cent. is readily perceptible, by the somewhat darkish yellow colouring of the coagulum and serum; and an addition of 2, 4, 6, per cent. of water causes progressive degrees of colouring; 8 to 12 per cent. make the colour orange; and 16 to 20 per cent. very red.

It was now an important question to ascertain the proportionate quantity of water which the blood of a living animal may absorb by drinking. For the sake of solving this question, I caused an ox intended for slaughter to be supplied, previously, with a great quantity of water, to the taking of which the animal was, moreover, stimulated by mixing it with salt and flour, and making it thereby still more palatable. A quantity of blood was then drawn from the animal, which had now absorbed water from the stomach, which, being afterwards inspissated, showed the amount of solid substance contained in it. 24 ounces of blood yielded in this case after inspissation, $3\frac{3}{4}$ 63 1 \mathfrak{D} of solid substance; shewing that 24 ounces contained $20\frac{3}{4}$ 13 2 \mathfrak{D} of water. The proportion, therefore, of the constituent parts in the blood, diluted by much drink, was—solid substance, 16 per cent.; water, 84; making together 100.

The same animal remained now, previous to being killed, 24 hours without any drink, and 24 ounces, obtained by the process of killing it, yielded after inspissation—of solid matter, $5\frac{3}{4}$ 33 12gr.; consequently, the water amounted to $18\frac{3}{4}$ 43 48gr. The blood of an animal which had been subjected to thirst was composed of—solid parts, 22,5 per cent.; water, 77,5; making together 100.

As we have seen before, that the blood of the animal saturated with water contained 84 per cent. of water, the blood of the thirsty only 77,5, it is obvious that the increase of quantity of water in the blood after drinking was 6,5 per cent.

As it is known that the quantity of blood in an ox amounts to about 60lbs., this quantity was capable of receiving 3,9; consequently, nearly 4lbs. of water. This may seem trifling, if compared with the great quantity of water which such an animal drinks, (viz., 2 to 3 buckets, of 12 quarts each, consequently 32 quarts = 72lbs.) but the effects, which such a dilution if repeated or constant must exercise on the blood, are important. I have repeated these experiments on small portions of blood that I took from a living animal, at different times: at one time, after somewhat lengthened thirst—at others, after it had just drank. In one case, the blood of the thirsty animal contained—solid parts, 21,7; water, 78,3; together 100.

After drinking, the blood contained—solid parts, 16,9; water, 83,1; together 100.

In this case, consequently, the difference of the water amounted only to 4,8 per cent.

In a second case, there were in the blood of the thirsty animal—solid parts, 23,1; water, 76,9; together 100.

After drinking—solid parts, 17,3; water, 82,7; together 100:—the difference being 5,8 per cent.

If these three cases are taken as an average, the result is,—

1 . . 6,5
2 . . 4,8
3 . . 5,8

17,1 which divided by 3 = 5,7 per cent.

If this proportion be applied to man, it will be seen, that the quantity of blood contained in the human body being 30lbs., it may absorb by drinking 17,36 ounces of water; and it becomes evident, that the increase of water by vital absorption of the blood can take place to such a degree that a very perceptible action on the resolution of the blood globules will be effected. Because we have seen, that already additions of $\frac{1}{2}$, 1, to 2 per cent. of water effect perceptible changes, and that the addition of 4 to 6 per cent. of water to blood recently drawn will produce a very great solution of the colouring principle, and that even in the living animal this solution manifests itself by the red colouring of the fibrin and serum. It follows, therefore, that too great an amount of water in the blood (in whatever way it may have been occasioned) will have a proportionate influence on the state of solution of the blood globules, according to the length of time that such proportions of water in the blood shall have lasted. Whenever, therefore, either much water is absorbed by the lungs and the skin from a humid atmosphere, or if by the protracted use of any liquid nourishment much water is carried into the blood by the medium of the stomach, then the process of secretion of water by the secretory organs will not suffice to recover the normal proportion of the solid constituents. On the contrary, by the too precipitous solution of the cruor, the whole plastic process of the blood, and consequently the entire normal nutrition of the body, and especially the secretion of the bile are changed, as the whole mass of the blood assumes thereby a bilious character; cases which are especially apparent in the climacteric diseases of Europeans in damp tropical countries. It is interesting, and deserves to be well weighed on account of the analogous diversity which occurs in different persons—that there is a great discrepancy amongst animals in relation to their want for water, and their ability to bear damp. Sheep for instance, can, as it is well known, bear but a small quantity of water either in the surrounding air, or in their food, and suffer from many diseases in damp forest localities, whilst cattle will not be injured under similar circumstances. (Vide *Hufeland Journal of Practical Medicine*, March, 1838.)

[We shall give in our next number Professor Schultz's theory of the water cures, especially those at Gräfenburg.—Ed.]

CURABILITY OF CONSUMPTION.

To the Editor of the 'MEDICAL TIMES.'

SIR,—In my paper which appeared in your last number, on the Curability of Consumption, I endeavoured to sketch a faint outline of certain views tending, I conceive, to throw some additional light on this interesting question. I would now request attention more particularly to the assertion with which I commenced, relative to Catarrh. The antiquity of the opinion,—its general adoption by mankind, and sanction by physicians of every grade,—are not sufficient to deter me from giving it contradiction, and founding conclusions on the theory which supplants it, equally adverse to long-established usages. The frequent coincidence of catarrh with the manifestation of phthisis, cannot be denied; but this fact may be accounted for on a widely-different hypothesis from that which supposes the former to be the cause of the latter—and even, if not, leaves the assertion still wanting of proof. A very large proportion of catarrhal cases, it will be granted, are not followed

by phthisical symptoms; persons very liable to colds rarely die of phthisis; when this disorder shews itself in summer, catarrh seldom accompanies it: the coincidence takes place in the winter,—and, finally, there is no process of anatomical or pathological deduction by which we can be led to the conclusion. It seems to be one of those assumptions, which by tacit general acquiescence has been allowed to pass as an indisputable truth. Under what circumstances, and to what extent, it may be regarded as an exciting cause of the manifestation of this disease, is another and very important question. Laennec observes, "We meet with many persons whose first cold is merely the catarrh that accompanies phthisis, excited, no doubt, by the presence of tubercles in the lungs,"—making out that catarrh, is frequently the effect and not the cause. This may be explained as follows. An extension of irritation takes place from the diseased structure into the bronchial ramifications. The trachea is then affected and irritated by sympathy, which extends itself further into the mucous membrane of the other lung.

But we may safely go further than this. Irritation and inflammation of the mucous membrane, when severe, may, and often do, lead to liquefaction of tubercles already formed; i.e., may cause the manifestation of phthisis, previously latent. By attending to this distinction, the chances of misunderstanding will be considerably obviated. More of this, however, in our next.

The most heterodox part of my assertions will perhaps be regarded—as that which lays down, that catarrh possesses a curative influence on phthisis—that it is one of the great conservative powers of nature, and beneficial effects of climate, in this destructive disease. I have stated how it operates by dilatation of the air-cells, and expansion; and, on this head, court the most ample discussion. "The motions of the upper part of the chest," Sir James Clarke states, "at the early periods of phthisis, if carefully observed during inspiration, may be remarked to be unequal; one side of the chest being more fully expanded than the other." In the progress of the disease, "the upper parts are less freely raised during inspiration," and at the advanced state, "the form of the chest is remarkably changed,—there is a deep hollow space between the clavicles and the upper ribs—the chest is flat, instead of being round and prominent, &c." What do these changes of form, so evident to every observer—this collapse of the substance of the lungs, in various degrees, indicate, but the necessity of that counter-expansion which nature is frequently enabled to effect in the manner I formerly described?

This leads me to advert to the popular and fashionable practice of relegating patients at various stages of phthisical development to mild or foreign climates. It is singular that so much care should be taken to secure a mild mean temperature, and yet, when we come to enquire of patients who have wholly or partially recovered, we shall find their symptoms had first developed themselves in winter. By the occurrence of the development at this season, it had the opportunity of associating itself with catarrh, defeating the contraction of the chest, and thus opposing the production of fresh tubercles. The softened tuberculous matter became eliminated during the winter; and the return of the spring and summer removed the catarrh, leaving the patient for the time secure. In phthisical families, as has frequently been pointed out to me by Dr. Ramadge, those members of them who are catarrhal, are the only survivors when left to nature. Indeed, his experience enables him, with a little enquiry, to quiet the apprehensions of relations, by pronouncing who have passed through the tuberculous ordeal. Again, we shall generally observe that fatal cases are those which first shew themselves in summer, and are thereby deficient of the benefit of early association with catarrh. On the other hand, let us examine a number of cases of chronic catarrh within the first five years, before the traces of the early symptoms have vanished from the mind, and we shall meet with many who retain a lively recollection of the existence of the indubitable signs of phthisis antecedently. Even so late as ten years, in one-half the instances, by properly-put questions, and calling in the aid of

their friends' reminiscences, the same results will be obtained. The catarrh supervening, has arrested, or permanently cured, the consumption. The phthisical patient, by going to a southern climate, loses an important chance of recovery, by catarrh, the most frequent cause of which is exposure of the cuticular surface to cold, which constricts the superficial vessels of the body. The deeper-seated vessels then become congested, and the bronchial mucous membrane has a difficulty in transmitting its venous blood into the venous system, and thus becomes tumefied. This tumefaction arrests the disease, as explained in the former chapter.

PHILANTHROPOS.

MEDICAL MEMS. OF THE WEEK.

AUSCULTATION IN PREGNANCY.—To determine the position of the maximum intensity of the double sounds of the foetal heart, we divide the abdomen into four parts by two lines crossing one another perpendicularly at the umbilicus, one falling from the extremity of the xiphoid cartilage to the symphysis pubes, the other running horizontally from side to side. In cranial presentations the sounds will be heard most intensely below, in presentations of the pelvic extremity above the transverse line; the precordial region being nearer to the head than the pelvis. It is very difficult to diagnose presentations of the trunk, inasmuch as the sounds being heard below the transverse line, they may be confounded with cranial positions. The maximum intensity of the sounds on the right or left of the perpendicular line indicates a right or left position of the head. The more distinctly the sounds are heard in the median line, the greater is the probability that the abdomen of the child is directed anteriorly. In the opposite position the sounds are heard more clearly in a lateral situation. But these signs, especially in the latter case, are very difficult, and we are often obliged to have recourse to other means to assist in the diagnosis. A table is added, according to which a correct diagnosis was formed by auscultation in 223, a false one in 68 cases of pregnancy. The large proportion of the latter was owing to the difficulty in determining the anterior or posterior, and right or left positions of the child.

DISEASE OF THE NASAL FOSSÆ.—A man, aged 71, suffered at the end of last winter from a severe cold, which subsided under proper treatment. On the 6th of April he was attacked with pain about the left side of the forehead, extending to the left side of the face and the left ear; it was very severe, and deprived him of rest. The left nostril was dry, but nothing abnormal could be seen in it. The left eye was pushed forward, and had an amaurotic appearance, but the sight remained. Various topical remedies to relieve congestion were employed, in spite of which the disease rapidly progressed. The pain increased, the eye was projected beneath the orbit, vision became impaired, and paralysis of the upper eyelid took place. At the same time a small firm swelling appeared at the inner canthus, and acquired the size of a pea. Several severe hæmorrhages occurred from the nose, which reduced the patient to an extreme degree of weakness, and he died May 17, without having experienced any cerebral symptoms. On examination of the head, a pretty considerable layer of gelatinous substance was found upon the surface of the brain; but it does not seem clear that this had any connection with the other disease. In the left upper nasal cavities was found a growth, resembling in texture a fleshy, very firm polypus, which was situated beneath the cribriform plate and in the sinuses of the left æth-

moid bone, being principally confined to this situation, but constituting also the projection at the inner canthus. The posterior æthmoidal cells and the sphenoidal sinuses were enlarged, and filled with a mass resembling in consistency and appearance thick pus. The mucous membrane lining these cavities was destroyed, and the inner surface of the bone carious to a considerable extent. There had been no escape of the matter towards the interior of the cranium, but it appeared to have gained a partial exit into the nostrils. The author remarks that, although morbid growths in these cavities are by no means rare, such expansion of the sphenoidal sinuses with destruction of their sinuses are very seldom found. He states that he had been unable to find a similar case recorded in the works of several authors to which he has referred.

CONVERSION OF NERVES INTO FAT.—The body of a male subject, aged 30, was brought for dissection into the anatomical school at Marburg. The whole body was dropsical, and the left leg, from the foot to above the knee-joint, firmly swollen. On the dorsum of the foot were ulcers, from which sinuses could be traced into the tarsal joint. Dissection showed the cellular tissue of the limb infiltrated with plastic lymph, which in the neighbourhood of the ankle had a fatty, and higher up in the limb a fibrous appearance. On account of the carious condition of the joint, as well as the firm nature of this deposit, which was situated between the skin and fasciæ, and also, beneath the latter, between the muscles, the movements of the lower part of the limb had evidently been suspended for a considerable time. The muscles were pale and flabby, but in other respects not altered in structure. The larger trunks of the nerves in the upper part of the limb were quite normal, but as they approached the affected part they became thickened, and appeared as if composed of mere fat. Portions of the saphenus, and other large branches of the ischiatic, so far as they could be separated from the degenerated mass, with which their sheaths became more and more amalgamated the lower they were traced, were dissected and examined under the microscope; when it was found that an extraordinary quantity of fat had been deposited within the sheath and between the fibres of the nerve, which increased in irregular gradations as it was traced downwards, till it constituted the whole structure of the nerve. The fat globules appeared to be arranged concentrically on the inner surface of the sheath, and by a stronger magnifying power the primitive fibres could, at the upper part, be distinctly seen running in the centre of the fatty deposit. They gradually disappeared lower down, till at length no trace of them could be found, the fat globules having entirely taken the place of the primitive nervous fibres.

Saliva and other liquids in the mouth.—In a paper on this subject, Signor Boudet, confirms the opinion of the alkalinity of the saliva, having found it to possess this reaction both morning and evening, as well during a period of fasting as when food had been introduced into the mouth. The same reaction was shown when the test paper was applied to the arch of the palate, to the mucous membrane of the cheek, gums, and lower lip, these parts having been carefully wiped, and a small quantity of mucus allowed to collect on them without the contact of saliva. The posterior surface of the upper lip was the only part which gave an acid reaction. From his experiments the author infers that the glands of the upper lip are the only parts which furnish an acid secretion in the mouth, and imagines this to be the cause of the de-

cay so frequently observed in the incisor teeth of the upper jaw as compared with those of the lower. The acid secretion flowing directly upon these teeth, and not being sufficiently neutralized by the alkaline saliva, which washes this part in less quantity than any other portion of the mouth, corrodes them by decomposing their phosphate of lime, and induces early decay. He therefore recommends the use of an alkaline powder in cleansing the teeth, which is to be especially applied to the incisors of the upper jaw.

SECALE CORNUTUM.—Dr. Bernhard Ritter of Rottenburg thus sums up the therapeutic uses of the ergot in other cases than as an adjuvant to labour. Its use is indicated in cases of hæmorrhage, and especially in uterine, uteroplacental, and puerperal hæmorrhages, in critical epistaxis and hæmoptysis, and as a prophylactic against uterine hæmorrhage in women, who have lost much blood in previous labours. In this last-named case, the ergot is given in the dose of a scruple to half a drachm about a quarter of an hour before the expected birth of the child. It is also indicated in amenorrhœa and dysmenorrhœa arising from torpor of the uterine functions, in vaginal blenorrhagia, chronic idiopathic leucorrhœa not dependant on a venereal cause, and for the expulsion of moles and uterine polypi, or at least to propel them so that they can be seized. The ergot is also recommended in intermittents when unaccompanied by phlegmasia, and in chronic diarrhœa.

SUSPECTED ASSASSINATION.—A butcher was found dead in the open air, near a quarry, in January last, lying on his back, and a little to the left side, with both his hands in his pockets. A pistol that had been discharged lay on his left side (he was left-handed.) Blood had flowed freely from a wound in the head, and had covered the face. Two shots had been heard immediately previous to the finding the body. On examination of the body by M.M. Devergie and Roger, a round wound, a little above and in front of the right ear, with depressed edges, and communicating with the cranium was discovered. The skin was neither blackened nor torn, and the fracture of the frontal bone, which extended backwards to the squamous portion of the temporal, was clean. Two balls and the wadding had entered by this wound. The balls had traversed the brain, leaving disorganization in their track, and had impinged against the occipital bone, which was fractured; they had slightly diverged from each other in their course. The wadding did not pass into the interior of the skull. There was a great effusion of blood on the hemispheres, and at the base of the brain. One of the bullets was blackish, and smaller than the other, which shone as if new, or made of tin. The wadding was a bit of printed paper. Thus far the death might have resulted from a duel; but there was another wound on the left cheek, with unequal, lacerated, contused, bloody, and blackish edges. The surrounding integuments were blackened by the explosion, and by the grains of powder, which had not burnt. The malar bone, the superior maxillary bone and its nasal process, and the zygoma were much fractured, and the superjacent tissues were infiltrated with blood, which also flowed from the nose and external ear. A coarse grey paper wadding was found at the bottom of the wound. There were not any other marks of violence on the body. Were both these wounds the result of one shot? In that case, the pistol must have contained three balls and two waddings, and each of these had diverged considerably from the route of the others. The wadding alone might have caused the wound of the cheek, but it could not have produced

such extensive fracture of the facial bones. The two wounds were distant nine centimetres from each other. There were then two shots, and admitting that one was fired in a duel, the other must have been the act of an assassin, fired when the victim was either dying from the wound in the head, or unable to protect himself from that in the face. In support of this view, only seven franes were found in his pocket, while it was known that he had fifty-seven with him. It was a matter next to impossible to decide which wound was the first inflicted. The pistol, which was found lying by the side of the body, was proved to have been charged for some time previously, and that it had had a detonating cap, there being coppery stains on the parts around the touch-hole. The barrel having been cleansed with a piece of white paper, it was proved to have been recently discharged, and that several times, the paper being marked with a blackish moist stain, and the distilled water with which it was washed out being tested with the yellow ferrocyanuret of potassium, the acetate of lead, the chloruret of platina, and the nitrate of barytes. The weight of the residue from the combustion of the powder was compared with that obtained by discharging similar sized pistols several times, and the examiners were led to conclude that this pistol had been fired more than once. The opinion was afterwards confirmed by the evidence in every respect.—The next question arose as to the possibility of two balls entering the cranium from a single shot, making but one opening, and that not larger, apparently, than if one only had entered. To decide this, M. Lepage, gunsmith, and M. Devergie, made a set of experiments, by which they ascertained that it was perfectly possible at ten paces.—It appears, then, that the deceased was wounded in two places, both shots being fired very near to him, and one quite close to him—that one of these wounds was necessarily fatal, that one was the act of an assassin, that the two wounds were not the result of one shot, that the pistols used had been charged a long while, and that they had been recently discharged, and that more than once. The only object in shooting him the second time must have been to ensure his death, with a view to the robbery; but why was only a portion of the money taken, and how came his hands in his pockets? If he were fighting a duel, he should have his left hand at liberty, as he was left-handed: nor could it serve the purposes of his assassin so to place them. There are several points left in doubt in this mysterious case.—A young man was afterwards arrested, who acknowledged to have been his antagonist, and to have fought at six paces, the prisoner having the first fire, by which he brought his man to the ground. He says he left immediately with his own seconds, and soon afterwards heard another shot. He refused to name his own friends, and did not know those of his opponent's. He was tried for voluntary homicide, and acquitted.

SUPERFICIAL CANCER.—M. Bouchacourt of Lyons, has published the details of a case of cancerous encanthis, in which he performed a modified and less dangerous operation than that usually practised. The patient was an old lady who consulted M. Bouchacourt, in June, 1840, for a red, granular, indolent tumour springing from the internal angle of the eye, close to the caruncula lacrymalis, rapidly increasing in size, both forwards and inwards, with lancinating pain, and bleeding at the slightest touch. She would not then submit to any operation, and when she returned, some months afterwards, the tumour had increased remarkably in size, pushing the lower eyelid downwards, and covering the whole eye in every direction. The

cornea was opaque, and vision lost. The pain was severe and lancinating; the slightest touch caused the tumour to bleed, and the patient was sleepless and emaciated.—The operation having been decided on, the projecting portion of the tumour was excised with a pair of strong bent seissors, when the external surface of the lower eyelid was found to be healthy, but not so its free edge and internal surface. By a slow and careful dissection, the diseased growth was entirely detached, when, it being impossible to save the entire eye, the anterior half, the part involved in the cancer, was readily removed. Some other indurated portions near the internal canthus were also cut away, and every part of the wound carefully examined with the finger, previous to its being dressed. The hæmorrhage was very slight. The diseased growth proved to be decidedly cancerous, and the cornea and sclerotica were both involved.—The dressing consisted in drawing the eyelids together, and securing them with adhesive plaster, layers of lint, and a bandage. Anodynes were administered from time to time, no bad symptom ensued, and the patient ultimately did well. Nine months have passed since the operation, and no relapse has occurred.

COLO-VESICAL FISTULA.—An old man, under M. Brequet, died, having previously laboured under symptoms indicative of a communication between the bowels and the bladder. On examination of the body after death, the sigmoid flexure of the colon was found to be imbedded in an encephaloid and scirrhus mass, on separating it from which an oval rupture of the posterior and lower part of the flexure was discovered, which communicated through the mass with an opening on the posterior surface of the bladder, the contents of the bowel having channelled a way through the cancerous mass. The rectum was scirrhus about two inches above the anus, and the cavity of the pelvis was nearly filled up with the diseased growth. The left ureter was compressed by the disease, and the kidneys were injected, with black suppurating spots on their surface.

CUTANEOUS ERUPTION.—Anne Sullivan, aged 32, admitted to University Hospital, on Friday, Dec. 3, 1841, under the care of Dr. Taylor, is a married woman, exposed to all kinds of weather, but sober and temperate in her habits. 17 years ago contracted syphilis from her husband; she had a discharge from the vagina, and sores on the external parts. She has had 15 children. For 14 years she has been subject once a year to an eruption on her body and limbs. This has been generally most severe when she has been suckling. Seven years ago she was in the hospital for three months under Dr. Thomson, for the same complaint. She has never had any other illness. About three months ago the eruption began to appear again, but instead of disappearing in a short time, as usual, it has got worse, and become more painful up to the present time. The eruption is pustular, extends over the chest and abdomen, and is very abundant on the thighs. She is profusely salivated from mercury, taken before she came into the hospital. Her breath has a strong mercurial fœtor. There are small, round, depressed cicatrices on the neck, and large cicatrices upon the head, evidently the result of syphilis, although she denies ever having had any secondary symptoms, nor even an eruption, except similar to the one she has at present. To have three grains of iodide of potassium in peppermint-water thrice a day.—Dec. 6. There is considerable discharge from the eruption; the mouth is no worse, but there is copious salivation. Increase the dose of iodide to four grains. Urine rather high

coloured; specific gravity 1.022; acid reaction: no albumen.—8. Much the same; her mouth as sore as yesterday; there is a little sonorous rhonchus in the left lung anteriorly; no morbus cordis.—13. Mouth much better; mercurial fœtor almost gone; eruption rather less marked. Increase the iodide to six grain doses.—22. The eruption has disappeared. She went out well to-day.

PLURALITY OF VENEREAL POISONS.—MR. Carmichael, in his clinical lectures on syphilis, while contending for a plurality of venereal poisons, says, an argument in favour thereof is afforded in the fact that different forms of the disease require different modes of treatment and management. For instance, the disease characterized by a papular eruption, does not require, either in its primary or secondary stage, mercury for its cure, a medicine which is positively injurious until the eruption is desquamating, and on the decline. The phagedenic venereal disease, both in its primary and secondary stages, is positively injured, and rendered more intractable by the exhibition of mercury. When the disease is on the decline, as indicated by extensive scaly-looking blotches, or tubercles, on the skin, where formerly ulcers, covered with crusts of rupia existed, mercury may then, and *not till then*, be useful in alterative doses, to expedite the cure. But my chief reliance, Mr. Carmichael says, for the constitutional treatment of this disease, is the hydriodate of potass, combined with sarsaparilla. That form of disease which is characterized by the scaly eruptions, psoriasis, and lepra, yields with certainty and rapidity to the exhibition of mercury, a proposition which cannot be advanced respecting the other forms of venereal disease.

ABSORPTION OF REMEDIES.—All substances capable of absorption may be divided into two species. The first, according to M. Mialhe, comprises those which are not capable of forming an insoluble compound with the albumen of the blood; for example, the alkaline oxides, the alkaline carbonates, and several of their salts, the compounds of arsenic and antimony with oxygen, hydrocyanic acid, carbonic acid, ammonia, all the neutral gases, nearly all the vegetable acids, all the organic bases, and most of the coloring and odorous principles.—The second species comprehends those substances which form an insoluble compound with the albumen of the blood. These are most of the inorganic acids, many of the metallic salts, tannin, creosote, &c. Substances of the first class act immediately on the nervous system; those of the second never act immediately on the nervous system, their influence being remote, and proportionate to the time required for the action of the oxide of sodium and alkaline chlorides of our fluids on the albuminous compound.—The chemical substances comprised in the first class pass rapidly into the urine, while those of the latter remain much longer in the circulation, and are not removed until the albuminous compound has been more or less decomposed.—From the above principles we obtain an explanation of many anomalies connected with the absorption and elimination through the kidneys of several chemical substances. For example, it may be asked why sulphuric, nitric, and hydrochloric acids, are absorbed so slowly and pass so slowly into the urine, while arsenious and antimonial acids, and most of the organic acids, are taken up so quickly. The reason is, that the first class of substances form a combination with the elementary basis of our tissues, which it is more or less difficult to break up; while the second class have no tendency to form an analogous combination. The following fact is

still more conclusive:—The oxides of iron pass off very slowly by the urine, or, if we believe Berzelius and others, do not pass into the urine at all; but Wöhler shows that the compound of iron with cyanogen and potassium passes into the urine with great rapidity. Now, the oxides of iron have a strong affinity for albumen, while the double cyanuret, just alluded to, has no tendency whatever to unite with albumen.

TO CORRESPONDENTS.

Several communications have been received, which are under consideration.

A. B., Mr. Rose's paper, W. N., Querens, A Wonderer, J. M., with the short paper on Mesmerism, declined.

Will PATER favour us with his name? We are pleased with the spirit of his remarks; but their length would be against their obtaining a perusal in the quarter where they are most needed.

P.—Our maxim is, "Nemo me impune lacessit." We will do no injustice to any man—nor suffer any.

An Observer inquires whether Philanthropos is in earnest in supposing catarrh a preventive or cure of consumption—and asks, would he seriously advise exposure to rain, or draughts of air, as his best curative agency in a decided case of phthisis?

X. C. is requested to call on the sub-Editor, at the office.

M. A. must do as we do—take such things at their worth.

Mr. C.'s case is this:—A (a Surgeon) commencing practice in Z, called, in pursuance of a very proper local usage, on B and C (resident practitioners). B returns the call; C, who is under obligations to A's father, does not. A, after a period, gives up his practice to D. Should D call on C? The question has two aspects. Inasmuch as the practice is a highly laudable one, a departure from it, except under the most special circumstances, should not be made. We are inclined to think the circumstances detailed, though strong, are not sufficiently so to justify the exception. The courtesy will be a mark of respect, not to C, but to his profession.

Druggists' Malpractice.—We are sent the details of an inquest held at Bradford—the subject of which appears to have owed his death to a druggist's very reprehensible interference. The druggist visited the man—administered too large a dose of some medicine—and prevented the attendance of a regular medical man, till his services were useless. The jury found the death to have been natural. If the law we some time since suggested, were in operation, the druggist would have lost his business, and received summary sentence of imprisonment. We wish the public press would assist us in warning the people of the difference between Druggists and Surgeons—and the danger of employing the former.

A Poor Carriage Man.—It has been decided by the Commissioners of Taxes, that the carriage and horses of a medical man, although required for the exercise of his profession, if occasionally used by him or his family for pleasure, cannot be deducted from his profits; nor will any deduction be made for the assessed taxes on them.

Professor Owen's Lecture on the Nervous System, and Orfila's Lecture on Arsenic, next week.

THE MEDICAL TIMES.

SATURDAY, SEPTEMBER 3, 1842.

At the

Qui me commoritur (melius non tangere clamo),
Flebit, et insignis tota cantabitur urbe.

We have been told that we have of late dealt some heavy blows to the collegiate troop of twenty-one. The blows were mercy—meekness itself—to the blow which within the last fourteen days, the twenty-one have, in return, dealt on us. If but four or five thousand of our subscribers

follow up the vengeance, by the *perhaps* greater cruelty of ceasing to purchase us, we are ruined for ever! Yes, tell it not to Mr. Wakley; let it not be heard by young Mr. Paget,—the high-minded dignitaries of the college, anxious to mark in strongest terms their virtuous indignation at our efforts to raise the great body of British practitioners to the position which naked right and sound policy demands for them, have, in solemn conclave resolved—at the suggestion of that meek and forgiving specimen of piety, Mr. Babington—that the "*Medical Times*" shall no more be watered with the heavenly dew of collegiate advertisements! They will send them to the *Medical Gazette*, and not unnaturally—for if poor praise is something to poor minds, they will have their money's worth returned to them; they will send them to the *Lancet*, and not unnaturally—for there the fee, though small, is, as it has been and we suppose ever will be, a sop to Cerberus; and they will send them alas! even to "the Minor," where no man sends an advertisement save as an alms—a much needed alms—as a day's grace between unappreciated worth and bankruptcy; but the *MEDICAL TIMES*—there are to be no more advertisements for it, till it has ceased to be plain spoken! And do the wretched minds of the puny bigots, or drivelling dotards, think that their contemptible advertisements affect us? Do they think that the threatened loss of their petty half sovereigns will deflect us from the straight road of duty which we are vowed to the profession to keep? How little do the wretched calculators know of us, or of high principle, or of pure honour, or of any thing but the meanness reflected from bosoms which an Old Bailey solicitor would blush to carry! The very procedure—mean, shabby, and infinitely pitiable as it is—stamps publicly a littleness of mind on them which can find its despicable equal in nothing but the dirtiness of heart which could suggest such miserable notions of human principles of action! We have always thought lowly of them, but certainly never thought them so low as this act paints them; an act after which they must have a greater alacrity in sinking, than even we attribute to them, if they contrive to fall lower. But we must not be too confident: the College and Pandemonium have this, with other attributes, in common; they have "a lower than the lowest deep." There are no limits to the depths to be reached naturally by the delvings of such maw-worms as a Babington!*

In our last number we divulged the plot of the Bandit Council—for all self appointed juntos are but legalized bandits—to reduce the great body of our medical brethren, "THE PROFESSION," as we properly called them, to the position of serfs; not only absolutely, but relatively. The

* Messrs. Guthrie, J. Henry Green, Liston, and Arnott, had, as might have been expected, no hand in this beggarly effort of ridiculously mean-spirited malice.

position of the general practitioner, in reference to his College, is at present, as Heaven knows, bad enough. As a student, the curriculum enforced upon him was one which, while ill-arranged and lamentably deficient, threw him into the hands of men whose title to teach him was derived not from their talent and erudition, but their influence—not from their experience, but their family intrigues; and after an outlay of some of the best years of his life, and of no inconsiderable sums of money, he finds himself a member of an institution governed by men over whom he has no control, who decree themselves whatever share they please of his and his brother members' money, and who make regulations and laws deeply affecting his pecuniary welfare and standing in society, while unempowered by any portion of his brethren, and responsible to none. This is certainly no small injustice, and contains no trifling insult; but it is still not as insulting or as unjust as must be the elevation of some two hundred men, to whom he now stands as equal, into the position of his superiors, who are in future to be recognized as real members of the institution, possessing the privileges that properly belong to them in that character, while he and his nine or ten thousand brother practitioners are to be regarded as unworthy of any concern in the institution, which they equally support with the best of the elect, and to be badged before the public as the college's subalterns and serfs—an inferior race of medical men! We will not appeal to the general practitioner's sense of justice against this bandit proceeding; we will not speak of the stigma it publicly stamps upon his brow; the sense of moral debasement with which it must weigh down his heart;—but will content ourselves with suggesting to him *its probable effect on his practice and pecuniary receipts*. He will be cheated of course—but we allow him to pass that by; he is humiliated—self disgraced—he may pass that by; *his standing in society is lowered*—lowered a whole strata—he may overlook that too:—but he is robbed—his whole future in its pecuniary expectations interfered with,—will he allow that? If he *does*, why then we say in disgust and sickness of heart, he has our consent for that too. But we know our brethren; they are far too spirited to submit to such insult and robbery from the corporators, whom they have paid to protect them; and ere the six months pass, at the end of which the Corporate Banditti are to set about their daring exploit, we shall see such a combination against them as may not only cut short their enterprize but give some good account of themselves.

Of late years there has been much talk and much unanimity on the necessity of a good preliminary education for the Surgeon. It has been held, that his success, nay his very escape from utter loss of time, as a student, depends on his possession of a liberal education; that without it he must be a disgrace to his profession, and a professional pest to his fellow citizens.

Such of the twenty-one who were examined before the House of Commons spoke even in emphatic terms of this necessity, and gave honourable members a very natural conviction that they would sooner abandon their shares of the diploma money (the highest conceivable sacrifice they could make) than admit a non-educated man into their profession. We are not fortunate enough to have the acquaintance of any of the numerous gentlemen whom they have of late certified as worthy on this, as on all other scores, to be fellow members with themselves of the college, but by an accident we have enjoyed the honour of a correspondence with one recently successful candidate, and as the letter gives some striking evidence of the vital importance which the examiners practically connect with a *good* preliminary education, we shall take the liberty of submitting it to the public's careful attention. We would willingly suppress the writer's name from a delicate regard to his doubtless sensitive feelings, but as suppression might throw some doubt on the genuineness of the successful postulant's claims to a distinguished place in the lists of our British classics, we are obliged, and with no feigned reluctance, to verify the attesting document with his veritable name and address, which may be inspected at our office by any curious or doubtful enquirer.

(To the Editor of the 'Medical Times.')

Glasgow, 23d Aug.

SIR,—I am *Real Sorry* that you make such a mistake with my name in the Medical Times, of giving account of the Gentlemen admitted Members of the Royal College of Surgeons London on the 5 of August 1842 you give H. Jones in place of W. Jones. I have the *most discredit* for your mistake, and *It will interfere* very much with my Practice (!) my name was written in *full letters* 3 times at least in the College By my own Hand, William Jones. But I *Do not know how the felt may Be Done* the thing was *plain as Possible*. I beg your favor to *correct* the thing *Again* so soon as possible BY REPEAT the list of Gentlemen was admitted that night 5 August 1842, and Give my name in full letters, and my Residence, and *At will Pay Expenses By Post*, or any way *WICH* most convenient to you.

WILLIAM JONES,
at Mrs. J. McCracken,
250, High St.
Glasgow.

On the direction we have superscribed "SPEED," and under that urgent word, "To be Delivered *Imadiately!*"

Twenty pounds out of which each of the Examiners got half-a-sovereign, was, no doubt, to *gentlemen* who think the withdrawal of an advertisement a serious punishment to 'THE MEDICAL TIMES,' a strong motive to pass our more pitiable than culpable correspondent into the body whose *honour*, Mr. Guthrie tells us, some of them have sworn eight times to defend; but we cannot consider that it could have appeared even to them a *sufficing* motive. May there, then, have been another motive silently connected with the conspiracy we have been laying bare? Is it a

part of their craft to degrade the *character* of the general practitioner before attempting to lower his *position*? Can any friend of Mr. Babington favour us with some fresh light on this yet dark subject?

REVIEW.

Fallacies of the Faculty; with the Principles of the Chrono-Thermal System, &c. &c. By SAMUEL DICKSON, M.D., late a Medical Officer on the Staff. Second Edition. London: Simpkin and Marshall. 1841.

A work which has made, and is making, so much noise—which attempts to subvert the long established data upon which much of the philosophy of medicine is founded—which commences with a tone of angry defiance, and concludes with a voice of bitter invective—requires a somewhat more than ordinary care in reviewing, because, while the professors of medicine are vindicated from the very heavy charges which are brought against them, the claims of the author to be considered as the founder of a new school, must not be overlooked. Innovation, however, either in politics or science, is always attended with difficulty, for the reformer has to contend against antiquated notions, deeply seated prejudice, and—what is more than this, than these, than all—self-interest. It is not in human nature to act with perfect disinterestedness, and Dr. Dickson must not be surprised if apothecaries and general practitioners resent the publication of his book as an injury done to themselves. But what guarantee have either the public or the profession that he is the exception to the rule, and that he stands alone, the high and lofty idolon of an unapproachable probity, which easting aside the trammels of worldly feelings and worldly motives, stands forth the assertor of the public wrong? We have a right to ask this question, because a reviewer sees nothing but the *work*, and not the author, before him, and whatever character for skill or knowledge Dr. Dickson may enjoy, cannot be allowed to have weight in an examination like the present; consequently divesting ourselves of all knowledge of the author but that furnished by his book, we shall proceed to examine calmly his claims to originality, and his right to the confidence of the public.

It is difficult to lay hold of any proposition in the work, which may not be explained away, for Dr. Dickson is a practised logician, and like the Tartar horseman to whom Goldsmith compared Johnson, "if he does not shoot you with the barrel, he knocks you down with the butt-end,"—or like Wagner, in one of the German diableries, runs you through with a syllogism. His is not the "easy language which trickles rather than flows;" it is rather like the mountain torrent, foaming, and boiling, and thundering down some precipitous rock, sweeping away much that is useful and ornamental, and leaving little behind but ruin to mark its headlong career. There is a vehemence, which the imaginative may ascribe to genius, and a virulence, which the superficial may mistake for originality, but which the more deeply thinking, are apt to consider the ebullition of temper, and the bitterness of opposition. To prove that a man is worthy of public confidence in any profession, it does not seem to us to be necessary to accuse all others in the same line of being unfit for private life. Such virtuous characters, and such outrageous scoundrels are rarely met with, but in the region of romance, where above all places we would not expect to find a physician. However, to our task.

With the very FIRST proposition of Dr. Dickson's work we are inclined to quarrel. He says, "We daily hear of the march of intellect, of the progress or perfection of many branches of science. Has medicine kept pace with the other arts of life?" &c., (see p. 1.) We boldly answer that it has. Has the introduction of the alkaloids not improved and simplified the practice of physic, and consequently improved the general health of the people? Has vaccination not been an improvement? Has the dry-dressing in ulcers not been an improvement? Is the discontinuance of the use of mercury in syphilis to the extent it was formerly carried not an improvement? Is the operation for strabismus not an improvement? Is the division of the tendon in contraction of the limbs, or curvature of the spine, or the late operations in aural, ocular, and dental surgery not an improvement? And finally, has not the value of human life increased, and the rate of mortality diminished? And to what are these owing, but to the gradual improvement in the principles and practice of the profession, leading to improvements in ventilation, drainage, clothing, diet, exercise, sleep, and amusement, which again re-act upon the general health?

It has been too often the custom with every new candidate for medical patronage, to endeavour to elevate himself upon the ruin of his opponents, and to build a reputation on the materials which his industry in destruction has supplied. But these edifices of transient popularity have generally vanished with the architect, and "like the baseless fabric of a vision, left not a wreck behind." What have become of the doctrines of Borelli, Bellini, Rasori, Keill, Pitcairne, and Brown—the latter in many respects partaking of the *perfervidum ingenium Dicksoni*?

We calmly ask Dr. Dickson, if when he wrote the following passage, the organ of self-esteem was not preternaturally active?—"The profession being, every man of them, as ignorant as himself (Dr. Baillie), was easily stultified by his greater pretension to sagacity, to say nothing of the dexterity with which he employed a long farrago of medical jargon—jargon which though not one of them understood, not to appear fools they all pretended they did understand? Dr. Baillie was a man of the world, and he took advantage of its two great weaknesses—ignorance and vanity. When the apothecaries called him in, he praised their skill and flattered their prejudices. A little attention to their interests in the quantity of physic he ordered, was also a ready way of succeeding as a London doctor. To impose on mankind is to secure your fortune; to tell them a truth they did not know before, is to make your ruin equally sure."—(p. 3.) We doubt if the latter part of this sentence can apply to the doctor, since he makes no complaint of ruin staring him in the face—but rather a well appointed carriage and rubicund domestics, would seem to imply the contrary: and with reference to the weakness and ignorance of the world can Dr. Dickson absolve himself entirely from the charge of rendering them subservient to his own views? Are the terms Chrono-Thermal perfectly intelligent to the mass who read or believe in "The Fallacies of the Faculty?" But to proceed. We are told at page 4, after a great deal of rambling writing, that "in 1693, Dr. Groenvelt discovered the curative power of cantharides in dropsy," and that he was committed to Newgate on a warrant of the President of the College of Physicians, for giving that medicine internally, while Sir Henry Hallford, a succeeding president, imitated Groenvelt. This we think a proof that the College of Physicians

have improved whatever Dr. Dickson may say to the contrary. But then Groenvelt was *not* the first who gave cantharides internally, nor does it appear that his prescriptions were so harmlessly intended as Dr. Dickson would imply, and consequently we suspect the reason for committing him to Newgate was not for giving cantharides internally, but for administering it with improper motives. For the President of the College of Physicians, could scarcely have been ignorant that the great master of the art, Hippocrates, prescribed cantharides internally in wine and honey. And it seems, indeed, up to a certain period, that this was the most general mode of administering that objectionable drug, as we are expressly told by the writers on medicine, that Aretæus was the *first* who used cantharides "for the purpose of blistering the *surface*; he rubbed them on the head in epilepsy and headaches:" by which it might be inferred that it was until his time only used internally. But upon this inference we have no desire to insist.

It is a proof of temerity, if not a want of prudence, to particularize *facts*, and *individual* cases, in writers, like Doctor Dickson, who aim at the total subversion of systems and theories by impulsive attacks and dexterous *coups de main*. While they continue to deal in generalities, to discharge their bolts at random, and to be discursive rather than discriminative—they sometimes impose accusation for evidence, and succeed in substituting allegation for proof. But the moment they present an open front, we are enabled to meet, and battle with them on fair terms, and if they should be victorious, so much more the honour; but if vanquished, then are they covered with confusion, for the faith which they created in others, and which by a reflex movement re-acted upon themselves shaken. And as in religion, so in medicine; shake the belief of a devotee in the authority of his prophet, or the confidence of a patient in the skill of his physician, and you have removed the obstacle to the birth of scepticism, which is the prodromus of infidelity. If it was necessary that Cæsar's wife should be not only virtuous, but above suspicion, so the founder of a new doctrine, whether in religion or medicine, should be not only (apparently) infallible, but he must appear to be above the possibility of error. Hence the danger to Dr. Dickson's reputation, when he singles out, and adduces cases, or arranges and propounds systems. Thus at page 49, where, indeed, his remarks on apoplexy are consonant with those views of the disease which most enlightened physicians entertain, he says, "the apothecary practice of starving and bleeding to prevent or cure apoplexy, is the most certain mode of producing this disease in persons predisposed to it, and of confirming it in such as have already shown the apoplectic symptoms." By this and the succeeding statement at page 80, the disciples of the Chrono-Thermal system are led to believe that Dr. Dickson is the discoverer of this *new* practice in apoplexy. Now it grieves us to point out the errors (we hesitate to apply the offensive word ignorance) of a man of Dr. Dickson's pretensions, but it is, nevertheless, our duty—seeing as one of that "ignorant" class which he has not scrupled to denounce as a mercenary band of unprincipled public plunderers—we are necessitated in self-defence not only to disprove the allegation, but to retort the charge. Asclepiades, who lived 90 years before the birth of the Messiah, and who, like Dr. Dickson, had such confidence in his skill, that he laid a wager he would never be sick—and won it too!—for he broke his neck in a fall, at a very advanced age—never bled in apoplexy or inflammation of the brain. Neither did he bleed in continued fever, nor in inflam-

mation of the substance of the lungs. A fact so important pertaining to the friend and physician of Cicero, should not have been passed over by Dr. Dickson. But Themiston, the pupil of Asclepiades, and the founder of the methodic sect, went still further than his master and repudiated general bleeding altogether, substituting leeches in the place of venesection. Hence to him is ascribed the honour of introducing hirudinism into practice. But again Galen tells us (*De venis sect. advers.*) that Chrysippus of Cnidus* was utterly opposed, as is Dr. Dickson, to bleeding in any case, but employed emetics much in the same way as Dr. Dickson! Erasistratus, the grandson of Aristotle, was also a great enemy to blood-letting, and purgatives, but, like Dr. Dickson, administered emetics. Hippocrates also was chary of general blood-letting. He bled in quinsy,—seldom in pleurisy, and never in "hæmorrhage or ruptured blood-vessels,"† which is Dr. Dickson's practice. Strange to say, while Dr. Dickson charges upon the profession (p. 53) in the following manner, and in language which we cannot but reprobate, the mal-practice of indiscriminate bleeding, coupled with the most servile and unprincipled conduct towards their patients—he forgets that at p. 51 and 52 he has quoted Heberden (one of us)—the servile and the ignorant!—in support of the very doctrine he endeavours to lay down with such intemperate eagerness, and to inculcate with such inexcusable warmth, as if the profession to a man had entered in a league against the improvement of medicine, and had bound themselves to obstruct the recovery of their patients! Surely, surely, this is unworthy of one whose talents are respectable, and whose opportunities of observation have not been limited. But to the text, he writes "To bleed or starve a person having a hereditary predisposition to spitting of blood, or apoplexy, is the most certain method to develop those diseases in their worst forms! Yet this is the daily practice of the most eminent physicians!—one, among many proofs, that in the medical profession, eminence is less frequently attained by *successful results* in practice, than by the dexterous employment of all those mean arts and petty intrigues which tell best with weak minds in the ordinary game of life," p. 53. We have quoted enough, for we think a greater injury could not be inflicted on Dr. Dickson than by transcribing the entire contents of the memorable p. 53.

Now, we unhesitatingly deny these statements of Dr. Dickson. The "eminent physicians," as he alleges, do *not* pursue such treatment. Is this the practice of Dr. Chambers? of Sir Charles Clarke? of Sir James Clarke? of Dr. Arnott? of Dr. Marshall Hall? of Dr. Roget? of Dr. Wilson Philip? of Dr. Elliotson?—or, in short, of any physician of eminence, or, indeed, of any man prac-

* We say of Cnidus, because there was another Chrysippus, a stoic, who, among other strange notions, held that a father should marry his daughter, and a mother her son, and that the dead bodies should be eaten rather than buried! This man died of vinous excess, or, as others allege, of laughter, from seeing an ass eat figs out of a silver plate.—*Credat Judæus Apella non ego*.

† Straton, a pupil of Erasistratus, as Galen tells us, panegyricized him for curing those diseases without the lancet, which had been previously treated with it. Celsus may be said to have been the great advocate of venesection; he bled children, pregnant women, and old people, and we confess we have followed his example in many cases and never saw any bad effect, but rather a marked improvement. In no instance, however, did we ever, on *any* consideration, repeat the

tising the profession in London, above the level of an apothecary's or a chemist's apprentice? If such be the case, then we know nothing of physic, and physic knows nothing of us.

But we can shew, from indisputable authority, not only that such is *not* the treatment of physicians, if we except possibly a few disciples of the exploded heresy of Armstrong and Rasori, but that it has not been so for many years. Sir Alexander Crichton, speaking of the treatment of typhus fever so far back as 1792 to 1804, when he left England for Russia, says, "delirium, in a moderate degree, was never considered an unfavourable symptom. *In no instance did I ever employ the lancet* for its removal. I never deemed it necessary."—(Commentaries, p. 44.) "The bilious form of typhus demanded the free use of emetics—the petechial typhus called for a liberal use of the mineral acids, and for larger doses of wine, which was found to be the best of all febrifuges" (p. 46) in other words, this was a modified chrono-thermal treatment. "It has been already mentioned," continues this eminent physician, "that blood-letting was seldom employed by the London physicians and practitioners at the period I am alluding to, that is, from 1792 to 1804. *On the contrary, it was generally condemned as a dangerous remedy*. Even in the cases in which typhus now and then commenced with catarrhal symptoms and pleuritic pain, the lancet was sparingly used; ten ounces of blood being the largest quantity which was abstracted at once. It was seldom repeated a second time; and yet I have not seen typhus fever in all its forms more successfully treated than it was at that time."—(p. 46.)

But were we to pursue the subject, which we are by no means disposed to do, to the extent it might be carried, we could shew that not only was blood-letting not so general as Dr. Dickson would lead his admirers to believe, but that much of the chrono-thermal or revulsive treatment had obtained a preference, and was in fact put in practice by many eminent physicians. Dr. Millar, of London, (*Observations on the Prevailing Diseases of Great Britain*, 1770) gave "one or two ounces of cinchona in substance, together with a strong decoction of the same in cinnamon water, in the very first stage of continued fevers, even if the pulse was hard, as well as quick, the heat great, the skin and tongue dry, and the urine scanty. Violent headache did not prevent the practice." And Dr. John Clarke, of Newcastle, recommending this practice, says, "I have shewn the safety and advantage of exhibiting the bark early in continued fevers, which occurred in my practice in this kingdom. From 1770 to 1791, I have attended about thirteen hundred patients in all the varieties of continued fever, and I do not remember that above four cases have come under my care, where the medicine failed."—(*Observ. on Fever*, 1790—also, *Observ. on the Diseases which prevail in Sea Voyages*, &c., 1792, *Second Ed.*—in which latter work Dr. Dickson will find much that will surprise him.) Dr. Clarke, however, writes still more strongly afterwards. "I can affirm," he says, "that within these few years my own life has been twice preserved by taking cinchona largely and liberally on the first day of confinement, in fever attended with such symptoms as would have deterred many physicians from prescribing it. And, did I think it necessary, I would adduce testimony of several medical gentlemen in this place, (Newcastle) who have found equal advantage from it, when exhibited in the same manner, either in their own cases, or in that of their relations or friends."

Now, the publication of Dr. Clarke's books produced a great sensation in London, and, as

may be imagined, his doctrine met with some opposition, though it was not couched in the violent language of Dr. Dickson. But, though it met with opposition, Dr. John Hunter, Dr. Lettsome, Drs. Huck and Sims, not only put it in practice, but published monographs approving of such treatment, they having found it useful. Hunter published his paper in the third volume of the Medical Transactions of the Royal College of Physicians, to which we beg to refer Dr. Dickson.

In some of Dr. Clarke's cases, petechiæ appeared, and they all terminated favourably on the administration of cinchona and opium. We should extend this critique to an unwarrantable length did we quote one-hundredth part of the authorities that could be brought to prove that Dr. Dickson has, without due examination, assumed for himself the honour of avoiding blood-letting, and substituting a novel mode of revulsive or dynamic treatment, under the imposing word, "Chrono-Thermal." We must proceed with some incidental notices, leaving the consideration of the periodicity and unity of disease for a future opportunity; and for this purpose return to the first portion of "The Fallacies of the Faculty," somewhat after the fashion of the author himself, whose mode of argument, and method of stating views, are like those will-o'-the-wisps which appear here and there and everywhere on marshy grounds, always dazzling and inviting, but for ever eluding and escaping our grasp.

And, first, of inoculation—(so called because the operation was first performed on the eye, or rather the lid of the eye,) and vaccination. That the inoculation and vaccination met with great opposition, is true—but was the introduction altogether of that character that the great benefits which they confer could be at once seen, appreciated, and admitted? It was contrary to theory—contrary to daily experience. To introduce a severe and too generally fatal disease directly into the system, in the opinion of the religious, seemed a daring outrage on the laws of God; while, to the prudent, it appeared a scheme fraught with danger and destruction, and, therefore, to be resisted on the common dictates of the ordinary sentiment or sense of self-preservation. It was only even in Lady Wortley Montague adopted, be it remembered by Dr. Dickson, *after she had seen and known its prophylactic properties*. Neither was the opposition to the practice exclusively confined to the profession, but the profession had to contend,* not only with the common sense of the people, but with the terrible denunciations of the clergy,—and in the first report, or at any rate one of the earliest reports, dated 1760, presented to George III.,—or, we believe, George II.,—(we quote from memory) by the Governors of the Small-Pox Hospital, they allude to, and congratulate themselves that they have overcome a certain amount of prejudice. Dr. Dickson must not forget, that, in medicine, we may be excused if we doubt until we have tested a remedy. Nor was the objection to inoculation quite so puerile or interested as has been generally believed: otherwise, why is it now forbidden by Act of Parliament? In continuation of this part of our subject, speaking of the opposition with which numerous remedial measures, or prophylactic medicaments, have had to contend, we do not think the Doctor has been very fortunate in the subjects he has selected. It is the nature of man to oppose reckless innovation, nor does this spirit, as he would lead his readers to believe, reside solely in the bosoms of the *tristes*

atque docti, "the sad and learned men" of the College of Physicians. When windmills were first erected, the mob assembled and pulled them down. So it was with steam-machinery, at Nottingham especially; nay with the most obvious improvements. Among others, that of the building of Battersea, or Putney Bridge, we forget which, when a certain Sir Something THOMPSON (we think that was his name) opposed the bill for its erection, in Parliament, because he thought the skirts of London would be too large for the body!—and again, that it would impede the tide of London Bridge! The same thing happened with gas, with dispensaries, with wood-pavements, and what not?

But we do believe we should write a volume almost as thick as the "Fallacies of the Faculty" did we notice every error which we think we can perceive as we proceed. Nevertheless, we are tempted to add a few words before we "set our seal upon this sheet." For example—the following frequently quoted passage is given by Dr. Dixon as original: "The ancients endeavoured to elevate physic to the dignity of a science and failed; the moderns with more success have endeavoured to reduce it to the level of a trade." The original sentence we think preferable: "the ancients endeavoured to elevate physic to the dignity of a science and failed—the moderns attempted to reduce it to the level of a trade, and have succeeded." There is we think more point, because some truth in the following *mot*, which we recommend Dr. Dickson to incorporate with the text of his third edition. The practice of physic "is the art of amusing the patient while nature cures the disease," and to parody it, we say jocularly, "The Fallacies of the Faculty" is the art of amusing the patient, while curiosity takes him to Clarges Street." But we are not partial to joking on serious subjects. Smart writing, pointed jests, apt illustration, and pungent epigrams, are very well in works of imagination, in the pages of literary reviews, in periodical works, in political squibs, or in polemical pamphlets, but their introduction is *questionable*, if not improper in works of a grave and solemn nature, as treatises on medicine and morals. In spite of Pope, ridicule is *not* the test of truth, for there is nothing under the sun, however great, or glorious, or grand, or elevated, which in the hands of a pregnant writer, like the late Theodore Hook, or a clever tactician like Dr. Dickson, cannot be made obnoxious to ridicule. We have no desire to replicate in the same strain as Dr. Dickson, or to imitate what we condemn in his style, otherwise there is not a page in the volume which does not furnish food for malignant wit, matter for scornful irony, or points for salient mirth. Nothing is easier than to write a smart and sparkling review. A few jokes from Hood, (our original friend, Mr. Miller, is getting out of date) an extravagant idea from Dickens, a bitter sarcasm from Byron, or a doubly distilled dose of venom from Lord Brougham, well worked up, and divided into pointed sentences by a few!! or— or??, is an admirable recipe for grilling an author, and feeding his reviewer. But we have higher aspirations than the mere gratification of bile, or the establishment of our character for wit, and we carefully avoid, as we anxiously eschew, all attempt at that English-bard-and-Scotch-reviewer's style, which so strongly characterizes Dr. Dickson's work.

We think him a man of some genius, of great powers of collecting and associating together facts and cases apparently remote and unconnected—and of a happy talent for elucidating his doctrines, and discovering his views by vigorous sentences and powerful images, but of a very rash and inconsiderate temperament, and

of an organ of self-esteem almost as active as that of Paracelsus, or of Thessalus, who, as Pliny says, (lib. xxix. c. j.) styled himself, and had the title engraved on his tomb, in the Appian Way, "Conqueror of Physicians." We part for the present on good terms with the doctor, and whether that will be the case when we come to consider his claims to originality in his theory of the unity and periodicity of disease, remains to be proved. He has given us a great deal of trouble to set him right, and we hope he will feel grateful for the pains we have taken, and the labour we have endured in critically examining his "Fallacies of the Faculty."

Methodus Medendi—Or the Description and Treatment of the principal Diseases incident to the Human Frame. By HENRY M'CORMAC, M. D., &c.

THIS is one of those books that may be praised but cannot be reviewed. A condensed collection of facts and opinions on nearly all human diseases—to pretend to analyse it would be to reprint the work, and to criticize it would be to review the whole system of medicine, with all its doctrines, and to compose a library. We shall best do our duty to the author and profession by transcribing to our columns one or two pages, which will at once shew the character of the work and the qualities of the writer. The following is what he favours us with on:—

ANAPHRODISIA, AGENESIA, STERILITY.

"Mankind naturally manifest much solicitude with regard to the healthiness of the reproductive functions, too often miserably abused. The object of nature in their endowment was the continuance of the species, and the origin of feelings which immediately, or by reflection, promote human happiness. The sexual tendencies require to be kept dormant till the bodily powers prove sufficiently matured for the procreation of offspring, and the mind adequately developed to incur the charge. The reverse only serves to undermine the strength and turn attention from those acquirements to the pursuit of which the interregnum of the passions is so fitly adapted. Morality points to this object, but society does not ensure it. Schools cannot always be secured from the intrusion of corrupted inmates, unprincipled teachers, and servants. *In sehr vielen Fallen, says Naumann, haben Ammen und Kinderwarterinnen das Entstehen der Onanie schon by ganz kleinen Kindern zu verschulden, indem sie dieselben durch Manipulationen an den Genitalien zu beruhigen suchen.* Improper books, pictures, and the occasional habits of social life, eke out the mischief; while the evil practices and imaginings of the day are re-enacted in the night. Evil communications corrupt good manners. The pure and innocent do not always escape the contamination of the demoralized. Even what should prove the sacred rites of religion, by dwelling without disguise on revolting iniquities, taint sometimes, I fear, when they should deter. I have been consulted by those who were reduced to absolute impotence by unrestrained addiction to solitary vice. One such, a teacher, informed me that while a boy at school, he and others used to repair to a secluded spot, and there pursue their fatal addiction. Neither minute doses of lytta, phosphorous, strychnia, steel in quantities, nor the shower-bath, though it braced the shattered health, and restrained involuntary nocturnal losses, proved of any avail in restoring lost virility. In other cases, obstinate hypochondriasis and general debility were the only, though sufficiently serious results. Well-meaning persons, from Tissot and Gruner down, with the best intentions, have universalized the results which follow from debasing habits carried to excess. Such over-drawn pictures only plunge the sufferer into misery and despair, and make him the easy prey of those rapacious vultures who, simulating the garb of faithful professors of our noble art, gorge themselves on the weaknesses of debased humanity.

* Dr. Mead, above all others, exerted himself to establish the practice of inoculation; yet he was the first physician of the day.

Nocturnal seminal losses, spermatorrhœa, may ensue from general and local debility, induced by sexual excess, or the mere repletion of a vigorous organization. Rare, however, in one case, as they are frequent and enervating in the other, the tension in which the organization is too often kept, acts on the mind, which being filled with erotic images, reacts on the organization, and so on, in a vicious circle, till at last the slightest cause serves to provoke a morbid erethism. Hence, as Lallemand, in his treatise *Des pertes seminales involontaires*, remarks, it comes when least expected, and when it cannot even be averted, constituting, in some cases, a sort of spermatic diabetes. This writer conceives that spermatorrhœa, more probably, however, prostatic emission, is frequent in chronic affections of the urinary organs, and more especially towards the close of the urinary discharge. In ordinary cases, the animal orgasm usually ensues in the early morning, and the individual awakes. The evacuation is not so weakening as the sexual erethism which precedes and accompanies it. *Immoderata seminis profusio*, observes Gaubius, § 562, *non solum utilissimi humoris jactura, sed ipso etiam motu convulsivo, quo emittitur, frequentius repetito imprimis lædit*. This is proved by the debilitating effects of masturbation, in either sex, before or after puberty. Among the disastrous results of sexual excess, though not always to be ascribed to it, is what is termed *tabes dorsalis* or *dorsalis*, marked by pain and debility in the lumbar region, creeping and shivering down the spine, sometimes followed or accompanied by hemiplegia, or paraplegia. The patient cannot go to stool without experiencing seminal losses; emaciation takes place; the extremities grow cold and œdematous, and the individual perishes in the last degree of exhaustion. It has been adverted to by writers, as Hippocrates and Aretæus, from the earliest times. Here, it has been asserted that the cauda equina loses from half to two-thirds of its circumference; while Horn, Otto, and Autenrieth affirm that higher up the spinal marrow becomes soft and atrophied. I met male hysteria in one case, and in another periodical convulsions, from sexual excess. In some few instances, the desire becomes so imperious as to constitute a formidable disease, named, according to the sex, satyriasis, or nymphomania. Erotomania, the more suitable designation, seems to arise from a kind of mental depravation. It has been known, as related by Foderè, to accrue from punctures in the genitals; from phosphorous; from lytta, of which extraordinary instances are mentioned by Chabrol; lastly, blows on the cerebellum, as adverted to by Gall and others. According to Esquirol and Calmeil, it is frequent among the insane.

A rigid, but silent, and as it were, unobservant censorship ought to be maintained over the young. Parents should be cautious to whom they commit their children, or with whom, by night or day, they allow them to associate. Youth is a jewel of which the purity once sullied is hardly to be restored. Instances to which I feel unwilling more distinctly to allude, would drive, could they be narrated, this matter home. Children, so far as may be, should sleep in airy, well-ventilated apartments, and singly occupy a mattress, with light warm blankets and counterpane, without curtains. Daily healthful fatigue in the open air ought to precede the night's repose. It is surely better to repress than to cure, to anticipate than to remedy. Should baleful habits be contracted, they must at once and for ever be relinquished; all impure ideas, habits, and companionship should be left off. The bed cannot be too hard, the covering too light, the food too sparing, or the muscular efforts, whether gymnastic or otherwise, too continuous, to realize so desirable an end. Unless pulmonary disease, or the season oppose, let a cold, at least a tepid shower-bath—a measure equally efficient in remedying nocturnal pollutions, be taken early every morning. Here I have found a blister to the perineum of service. Sthenic cases are easily remedied; asthenic, however, require treatment adjusted to the impaired constitution. The one will bear a spare diet and regimen, but the other requires nutriment and moderate stimuli. Aphrodisiacs, so termed, lytta, opium, and the rest, are but poisons; continence and sobriety are the best

restoratives. Mild, enlightened, and firm repression, when it can be practised, is best for all cases, whether in young or old.

Sterility is mostly confined to the rich. Individuals able to consummate the generative act, may yet be childless; physical obstacles and congenital defect are less frequent in the female than the male; in other respects, however, barrenness may lie as much at the door of one sex as the other. I have been consulted in one instance of hypospadias, the spermatic fluid being discharged through a fistulous opening in the urethra before it reached its legitimate outlet: I have also met an example of congenital retention of the testicles, one of which, however, occasionally descended through the inguinal ring. As it is possible that these organs may be absent altogether, it is necessary to observe whether hair be developed, and whether the usual changes ensue in the voice. Prostitutes are commonly childless, proving the deteriorating influence of promiscuous intercourse. Men whose powers have been broken down and impaired in a thousand arms, can hardly hope to perpetuate their race; or, if they do, it is after a spurious and degenerate fashion. It has been asserted, that the spermatic fluid of barren men was destitute of animalcula; I should not, however, be inclined to regard these as the human germ. Further researches on the inferior animals might throw light upon the subject. A latent incompatibility sometimes subsists; and it has happened, in cases of divorce, that parties, before childless, have respectively become parents. It is remarkable, that habitual excess in eating and drinking proves adverse to fertility; and such, I take it, is the principal source of the sterility of the rich; this has even been observed in the inferior animals. Habitual plethora seems to indispose to fruitfulness; while poor people, with a bare sufficiency, if even that, have houses swarming with offspring. The prolific tendencies of the Irish are well known; barren marriages are rare among them. Fish-eaters, ichthyophagi, who have to work hard, and live without excess, are proverbially fruitful. Hence it is that the reproductive tendencies of a people—a problem vainly attempted by Malthus and others, is in the inverse ratio of their comforts, and not merely of their numbers, as conjectured by Sadler. Hence, also, the poorer and more wretched a population, within certain limits, the more prone to increase. In other respects, the poor follow, but do not precede the promptings of nature. The rapidity with which the void left by famine, war, and epidemics, fills up, has been frequent matter of observation, and is readily enough explained by the increased facilities of subsistence and consequent inducements to marriage among survivors. In two or three instances, by enjoining separate apartments for a time, simply sparing regimen, the shower-bath, and exercise in the open air, I have reason to believe that the wishes of parents, previously childless, were successfully promoted.

From this extract (quoted more from its comparative shortness than any other reason) our readers will perceive that Dr. McCormac's merits are considerable—personal experience, a great acquaintance with the medical improvements that are constantly being made at home and on the Continent, and a very excellent judgment, solid and practical, in the application of his knowledge. Though we could frequently have wished him to have been less brief, we are compelled to admit that his brevity is the necessary result of his peculiar task, and we rise from the perusal of his work with feelings which leave us in doubt whether most to admire the extent of his industry or the comprehensiveness of his understanding.

EXTRACTS FROM FOREIGN JOURNALS.

(For the 'Medical Times'.)

GERMAN.—*The Berlin Medical Gazette*, June 22, 1842, contains five papers:—

Art. 1.—“On the value of Homöopathy; a leaf from the *Memoirs of my Medical Life*,” by Dr. Schlesier, is a rather satirical paper against Homöopathy.

2.—“Baths of Broth from Bones in an affection of the Bowels of Children.” (Asmus.) The writer refers to a former paper for an account of the disease, an epidemic diarrhœa. With the baths he used the acetate of lead internally, with argent nitrat, $\frac{1}{4}$ gr. in mucilaginous enemata.

3.—“Ought Spheacelated Hernia to be replaced.” (Asmus.) The writer is opposed to the opinion of Rust, and gives a fatal case, where the gangrenous fold accidentally slipped back while the stricture was being dilated, the gut then gave way and poured its contents into the cavity of the abdomen; the contents of the intestinal canal were very fluid and in large quantity; much passed through the wound.

4.—“Taxis in Strangulated Scrotal Hernia.” (Ollenroth.) After nearly 48 hours the hernia was reduced by the Taxis, after a lukewarm bath, bleeding, and syncope, and an enema containing 63 of liquor plumb. The writer attributes the results to the paralyzing effects of the lead upon the intestinal canal and the syncope from bleeding. We may probably give this paper at length.

5.—“Dysentery in the Circle of Gnesen, 1841.” (Dr. Pupke.) An epidemic from Aug. to Oct. The peculiarity of treatment was the exhibition of calomel gr. i—ij omni bihora, until grass green stools were procured, which was usually within 72 hours, attended with amelioration of the symptoms. If tenesmus and atonic diarrhœa remained, ol ricini, rheum, extract nuc vomie, opium, ipecac were given—the green stools constantly preceded the general crisis (abundant perspiration with warm skin), the quantity of calomel required was from 18-24-36 grs.; leeches were found of no benefit either to the abdomen or anus; nothing is said of general bleeding or whether ptialism followed in any of the cases.

The paper for June 29, contains seven papers:—

Art. 1.—“Upon passing the Catheter in Retroversio-Uteri, the woman resting upon her knees and elbows.” (Schöller.) An interesting paper.

2.—Plumb. Acetat. in Pneumonia,” with five cases. (Battalion Physician Dr. Metzger.)

3.—“Deafness and Tic Doloureux, the supposed consequence of Scarlatina relieved.” (Regimental Physician Dr. Kuhk.) By the endermic application of acet morphine by means of a blister between the mastoid process and the ear. The *prosopalgia* of the right side was in regular paroxysms twice a day, viz., 11 A.M. and 6 P.M., lasting from two to three hours.

4.—“Cauterization of the top of the Throat in incipient laryngeal Consumption.” (Regimental Physician Dr. Hasse.) He has used the solution of lunar caustic in the proportion of 3 ss. afterwards 3 i to aq. 3 ij, for the cauterization of the top of the throat, viz., the glottis and epiglottis. The solution is applied by means of a *repoussoir* bent half circularly, with a bit of sponge the size of a pea. In two cases in private practice, it was attended with complete success, and a third case of another medical officer's promised a happy termination. The cauterization which may be performed with incredible facility, commonly produces only mild burning sensation, scarcely a light cough, improves the hoarseness, lessens the expectoration, and diminishes the fever.

5.—“Dissipation of White Swelling in the Joints, by the external application of Lunar Caustic.” (Garrison Staff Physician Dr. Moritz.) He either draws lines a quarter of an inch from each other round the moistened joint with a stick of caustic, or with a pencil moistens the whole of the swollen

joint with a concentrated solution of caustic Zj —ad. 3ij 3 iij aq. distil.; in either application a blister is formed; after this has dried up and scaled off, the joint shews itself decidedly reduced in circumference. This procedure should be repeated according to circumstances, after the healing of the former, until the limb has attained its former size and form. Dr. Moritz assures us he has succeeded in more than twenty obstinate cases, which resisted other means, and in a short time, whether the disease arose from scrofula, rheumatism, or gout, or was the result of penetrating wounds.

6.—“Specks on the Cornea.” Dr. Everman cured two cases in a few weeks by the application (externally) of potass hydroid, gr. 5 to 8, ad aq. 3 vj.

7.—Dr. Büttner has successfully used the fresh expressed succus citri in the cure of hydrops acutus following scarlatina.

The paper for July 6th, contains seven articles, none of which are of much practical importance:—

Art. 1.—“On the comparative numbers of the Sexes in births in and out of wedlock.” (Steifensand.) The writer has come to no conclusion concerning the causes of the relative difference: he has given the relative numbers as follows; but it does not appear on what data they were founded:—In wedlock, males 106, to 100 females—Illegitimate, ditto 102 or 104, to 100 ditto.

2.—“Pollau’s Caustic Paste for the cure of Warts and Excrescences on the Skin.” A long paper of no value, as caustic is better.

3.—“Fatal Consequence of an Operation in Tetanus Träumaticus.” (Dr. Bredow, St. Petersburg.)

4.—“Unusual Effects of a Blistering Plaster.” (Dr. Bredow.)

5.—“Wide-spreading Abscess formation after Typhus Abdominalis.” (Regimental Physician Dr. Prätorius.)

6.—“Mania in the Convalescence from Nervous Fever.” (Regimental Physician Dr. Rudolph.)

7.—“Case of Dysphagia Organica.” (Regimental Physician Dr. Pauli.) Terminating fatally.

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On passing the Catheter in Retroversio Uteri, the woman in a state of Pregnancy, being in the position of resting on her knees and elbows. By SCHÜLLER.—(From the Berlin Medical Gaz. June 29th, 1842.)—It is well known that one of the most dangerous phenomena in retroversio uteri gravidi is the retention of urine. The relief, therefore, of this painful affection by the introduction of the catheter, forms the chief feature in the treatment of this complaint. The difficulties which sometimes prevent the employment of this instrument, may be here considered, not without interest, in a brief review.—The same cause which sometimes renders the access to the opening of the urethra difficult, sometimes impossible, will hinder or prevent the passing of the catheter into the bladder.—Tumefaction of the external genitals is especially the cause of the first impediment. They may sometimes be so swollen and painful that for the moment the introduction of the catheter is not to be thought of; but immediately after the removal of the obstructing cause, it will be proper to employ this instrument. In the Poliklinik of Herr Geh. Ober, Dr. Triestadt, in 1835, I have observed such a case. A particularly inflamed swelling of the external sexual organs, and even of the lower extremities, with the distended bladder rising to the scrofulus cordis, here accompanied the retroversio uteri gravidi, and it was only after the applica-

tion of 20 leeches to the upper part of the thigh, and the proper employment of internal antiphlogistic treatment, that it was possible to introduce the catheter. The woman completely recovered, and at the regular time had a living boy.—The access to the orifice of the urethra in this affection will often be rendered so difficult, that it will be drawn up behind the symphysis pubis, entirely out of sight.—This faulty position is produced by the portio vaginalis of the retroverted uterus, which places itself in an oblique direction, above the edge of the symphysis pubis, and presses into the hinder wall of the bladder or its neck. By its gradually increasing volume, it must, therefore, as is easy to be understood, draw up the neck of the bladder, and the urethra, behind the symphysis pubis.—This impediment, which prevents the passing of the catheter into the bladder, is too often observed and described, to render it necessary to give a more accurate description of it in this place. Often enough has it given occasion to puncture the bladder, to relieve the torturing pain of retention of urine, or induced the surgeon to remove the influencing pressure from the bladder, either by emptying the gravid uterus by direct perforation, or to rupture the membranes through the os uteri, so as to save the woman, by producing an artificial abortion. To be constrained to this mode of proceeding must certainly affect the surgeon in the most unpleasant manner.—When attempts with the catheter have been already made, they often render fruitless the efforts of another surgeon when called on. This happened to me in 1839. When a surgeon of this place called me to his assistance to a young lady—for whom, for a pretended inflammation of the bowels, he had attempted in vain to introduce the catheter. In spite of repeated trials, made with the greatest care, I did not succeed in passing the catheter through the so well known and short female urethra into the bladder. My proposal to puncture the bladder was not acceded to. The young lady died. The section, which would have cleared up the impossibility of catheterism was not performed.—It is not the place here to extend these introductory observations, I, therefore, beg leave to relate briefly a case of retroversio uteri gravidi, shewing a mode of treatment which proved successful over all the difficulties I have mentioned.—F. W. æt. 36, the wife of a journeyman shoemaker, a woman of strong make, rather tall and thin, had had three children. The two first came into the world dead, after lingering labours, with their heads much bruised. The third, being a very small child, was born alive. Towards the end of April of this year, the woman being in the fourth month of her pregnancy, one evening lifted up a heavy basket of wood from the ground. On the following morning she woke up with vehement painful endeavours to empty the bowels, with similar pains in the belly, and impossibility of making water. Being called in the afternoon, I found the abdomen much swollen and painful, the bladder had risen as high as the navel. Upon examination per vaginam, I found the portio vaginalis uteri thick and puffed, lying obliquely upon the upper edge of the pubis, and pressing into the bladder; upon passing the finger into the rectum, the fundus uteri was found sunk deep and backward between the rectum and vagina. At the same time I easily reached the promontorium, whose distance from the symphysis pubis was not more than 3 inches, the sacrum was strikingly curved, and the right pelvic cavity narrower than the left. The distance of the upper anterior processes of the ilium measured 10 inches. The pelvis shewed a complete rachitic character. (the sister of

this woman is also subject to difficult labours.) The cautious evacuation of the urinary bladder offered no difficulty. The catheter being properly secured, remained two days, the woman being in the horizontal position in bed. The bowels were emptied by lavements, and internal means. After two days she was enabled to pass her water of her own accord, and the abdomen became soft, and free from pain: except a mucous discharge which now first came on, and a small degree of backward inclination of the uterus, nothing more abnormal appeared in the internal sexual organs.

The complaint would thus have reached a happy termination, had not the woman, in spite of every admonition and assurance that it might quickly return, got up from bed after some days, and employed herself in her household occupations. On the 6th May, early in the morning, her husband came to me, and as a repentant sinner, informed me that his wife, with whom he had that night completed the act of coitus, was now suffering from the most frightful pains in the region of the bladder, and was again unable to pass her water: he believed he had been the guilty cause of this relapse. Endeavours to pass the catheter had been already attempted by another medical hand, but had not succeeded; my endeavours to it now also failed. By this time the bladder was enormously distended, and the woman screamed vehemently from the unbearable pains, and was desirous of any manner of relief from them.—What was to be done? Should I attempt the puncture of the bladder? With this painful and full bladder—(the least movement producing the cry of murder from the woman.) should I attempt the reposition of the retroverted uterus, through the vagina or the rectum?—or pierce the membranes directly through the uterus, to lessen its contents? For as to passing any instrument through the os uteri to pierce the membranes it was not to be thought of, for the portio vaginalis stood quite obliquely, and over the symphysis pubis, jutting forward into the bladder. I long considered to which measure I should determine myself. When I considered that the passing of the catheter through the urethra could not be effected, from these causes, that it was displaced and pressed together, and its hinder wall was perhaps already injured and swollen up by the previous attempts; that further, this hinder wall afforded no firm point of support behind it, over which the catheter might glide up, I therefore determined to pass it along the anterior wall of the urethra, which, by its lying along the pubis, offered a firm and sure support. With this intention, I caused the woman to place herself upon her knees and elbows, with the thighs drawn up against the abdomen, as much as this painful affection would allow. The bladder in this position obtained more free room, from the sinking downwards of the abdomen and the uterus, in this position of the woman, exercised by its portio vaginalis by no means so strong a pressure on the bladder, for its fundus must in some degree sink down towards the front, in case it was not firmly impacted. The access to the orificium urethrae appeared immediately in this manner more free, and into it was passed an elastic catheter without the stilet, that before could not be introduced; it now glided away with quick facility along the anterior wall of the urethra, over the supporting pubis, in an arch into the bladder, even in an instant, to the astonishment of the bystanders, and the urine shot forth in a stream. The woman wept with tears of joy, and thanked me in the most lively manner. I was myself not less rejoiced.—In consequence of this new treatment, she after some days found herself tolerably well, and nothing stood in the way of

her complete recovery. Notwithstanding, on the 10th of May, the retention again returned, in consequence of the woman having drank a large quantity of cold water the day before. The bladder again rose as high as the navel. In the same posture, the passing of the catheter, and the evacuation of the bladder, succeeded as before; on the same evening she was able to pass her water freely. The woman now became prudent from experience, remained yet 8 days in bed, and during that time lived cautiously and moderately. In the latter end of May, when she felt herself completely recovered, I found the uterus, which, by the farther course of pregnancy, should at this time have passed the narrow conjugata, directed in relation answering to its long axis, and its fundus, therefore, now directed more forward, but the portio vaginalis turned towards the hollow of the sacrum.—It will rejoice me if the experience gained in this case, by fortunate success in passing the catheter in the above described posture, shall be verified in other cases of like difficulty.—Whether this mode of passing the catheter in the position before described be new or not, gives me no concern; enough if it will enable any one to help himself in such cases, where till now the known remedies did not reach. With this aim, I have, (encouraged by Herr Geheim and Dr. Kluge) give publicity to this mode of proceeding

ITALIAN.—On the Ergot of Rye. By M. UBERTI.—Opinion seems greatly divided as to the action of this remedy; some regarding it as an excitant, while others, among whom our author ranks himself, consider that it acts by depressing the vital powers. In support of this opinion M. Uberti cites several cases occurring in his practice, in which this medicine exerted the most beneficial effects over the progress of affections evidently inflammatory; especially in thoracic inflammations. The following case will give an idea of the mode of administration, as well as the therapeutic effect which he attributes to the medicine. Case.—A young man, a mason, of a sanguineous temperament, after exposure to the cold, experienced a troublesome cough and great muscular prostration. He had shiverings during the night, followed by a burning heat and deep-seated, though slight, pain in the right side. A purgative draught was given him. The following day, the cough and pain in the side were augmented, especially during inspiration. He entered the infirmary with all the signs of violent pulmonary inflammation, pulse hard and accelerated, skin hot and moist, sputa streaked with blood. (Mucilaginous drink, 5 grains of the aqueous extract of ergot of rye, every second hour; low diet.) No change in the evening. Third day, the respiration was short, thirst great, features contracted and pallid, pain in the side more acute, pulse quick, but less strong. (The dose of the ergot was doubled; demulcent drinks.) Fourth day, exacerbation of all the symptoms, local as well as general, delirium, constant cough, anxiety, crepitant rales over almost the whole of the right lung. In this alarming condition, blood-letting appeared to be indicated, but was unable to be practised. The previous treatment was, therefore, continued, with the addition of leeches to the painful part, and a large blister over the sternum at night. The following day, there was but little change; the cough, however, was less troublesome, the respiration rather more free, the delirium not very marked. (The ergot was continued in the same dose.) Amelioration showed itself on the following days, the eighth and ninth of the disease, and the patient was soon declared out of danger.

Carbuncular Disease caused by eating the flesh of Oxen which had died of Carbuncle of the Tongue. By M. FURCHETTI.—In the year 1841, whilst an epidemic of small-pox was ravaging Tuscany, a carbuncular disease of the tongue had effected the cattle in the various provinces of the Grand Duchy. This meat, in spite of the laws, found its way into the market, and was bought by many on account of its low price. Most of these individuals became attacked with a carbuncular disease which presented itself under the following form: the invasion of the first symptoms took place, in some within twenty-four hours, in others, not till two or three days after eating the affected meat. There then appeared upon the face, lips, neck, and arms, very painful tubercles, surrounded by a small red circle. At other times small whitish pustules showed themselves with a violet-coloured areola. The eruption, consisting either of pustules or tubercles, gradually increased in size and assumed the characters of carbuncle, being surrounded with greater or less swelling. In most cases, at the end of a week, the separation of the eschar left a healthy wound which soon cicatrized. Still, in a few instances, the disease was troublesome; the inflammation assuming an erysipelatous form, attended with great swelling. In these cases, the eschar did not detach itself till the end of a fortnight, and the ulcer resulting from its separation, had a bad aspect. Nervous or gastric symptoms accompanied the local disease, and remained even after its disappearance. The most ordinary general symptoms were diarrhoea, vomiting, a tympanitic state of the bowels, *borboraemi*, loss of appetite, intense fever, delirium, prostration of strength, colic, insomnolency, tendency to serious effusions, epistaxis, and lividity of the face. Convalescence was generally very tedious. The most successful remedies were emeto-cathartics, and the most powerful antiphlogistics. Two cases only of death are related, and they occurred in aged persons. A most remarkable circumstance was, that those who killed the meat, and even those who carried it or sold it, were not affected with the disease, although in close and long continued contact with the unwholesome food, provided they abstained from partaking of it. Another point of interest is also presented in the mild character of the affection, notwithstanding the dangerous influence of a varioloid epidemic, which was at the same time raging through the country, and the successful results attending a depressing mode of treatment in a disease generally regarded as asthenic.

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by several Medical Men. Brunswick, gr. 8vo., 3 vols., with Plates and Woodcuts. [Now publishing in numbers.]—STROMBECK et MANSFELD, *Bericht*—Official Report on the Meeting of German Naturalists and Medical Men, in 1841. Brunswick, 4to.—BRUNS, V., *Lehrbuch*—Manual of General Anatomy of Man. Brunswick, 8vo.—[The German works above announced may be had through Mr. Alexander Black, 8, Wellington Street, North.]

MR. ELLIOT'S VINDICATION.

(We hasten to do Mr. Elliot the justice of inserting his reply to the charges sent to us against him, by Mr. Reeves, and which we gave in an abridged form in our "Notices to Correspondents," a fortnight since. Mr. R. must have surely laboured under some grievous mistake.)

IN reply to the wilful mis-statements in a paper by Mr. W. Reeves, you will oblige me by giving as early an insertion as possible of the following depositions made by the patient, Thomas Irving, ætat. 17, and his father, Mr. Irving, on August 19th last, in presence of Dr. Jackson, Dr. Tinniswood, and Dr. Cartmeil, who conducted the examination.

The Patient's Statement.

"I had been a patient at the dispensary for some time. Mr. Reeves several times introduced an instrument, and told me that I had a stone in the bladder, and that I could only be cured by an operation. About a week or so after that, he told me that I might either have the operation done at home, or at the infirmary. I did not know then who was to operate on me. He afterwards told me that Mr. Page would either cut me at home, or at the infirmary. I never thought that any one was to cut me but Mr. Page: I never saw Mr. Page. I saw Mr. Fleming in the turner's shop. I said that I had to see Mr. Reeves at three o'clock. The turner asked when I was going into the infirmary. I said my father and mother were not willing till I had further advice. Mr. Fleming asked what was my complaint, and why I did not get further advice. I told him it was expensive, and that Mr. Reeves advised me to go into the infirmary, but that I wanted to be done at home. Mr. Fleming told me that Mr. Elliot would give me advice for nothing, and I called upon him. Mr. Reeves never said he would operate on me; he advised me to go into the infirmary, and told me that the doctor of the infirmary would operate on me at home if I liked. After I had seen Mr. Elliot, Mr. Reeves told me that no one in Carlisle could remove the stone except the surgeon at the infirmary. He also told me, that the operation was only a cut in the lisk, and that I would be well in a fortnight or so: that the two children operated on for stone in the infirmary had both recovered,* and that the operation would be easier to do, and less dangerous, on me than on children.† One day when I met Mr. Reeves on the street, he told me twice that he would rather pay my expenses to London or Edinburgh to be operated on there, than let Mr. Elliot ruin me, as Mr. Elliot had never done the operation, and that no other doctor could do it. Mr. Elliot never told me that if I was cut I would be sure to die. I never told Mr. Reeves so. Mr. Elliot never showed me any book or table; he showed me a picture, and told me how he proposed to cut me if he found it needed. He told me the operation

* This was contrary to facts, as one of the children had died before this conversation took place, though its death was never publicly announced.

† The incorrectness of this statement may be seen by referring to any good surgical authority.

was dangerous, and that one in seven or eight died in the hands of the best surgeons, and one in four or five in some. *Mr. Elliot never told me he could cure me without cutting*; he said the stone, if small, might be made to pass along the canal by enlarging it gradually with instruments of different sizes; but when this failed, *he explained to me the operation he afterwards performed*. Mr. Elliot told me also there were either two small stones, or one small one with a notch or groove; he never said there were two stones for a certainty. Mr. Reeves told me one day that there were other means of curing the stone than cutting, and that I need not be afraid of coming up to the dispensary."

Statement of the Patient's Father.

"I saw Mr. Reeves once or twice; he proposed my son's going to the infirmary, to be cut for the stone, *but never offered to me to do the operation himself*. I was not willing for my son to go into the infirmary, on Mr. Reeves's recommendation, as I was not much acquainted with him, and had not sufficient confidence in him. Mr. Elliot told me he would introduce instruments of different sizes, and that the stone, if small, *might possibly come into the canal, where it might be cut out without danger*. *He never told me the stone could be taken out without cutting*."

"When this plan failed, he told me it could be taken out by another method that was less dangerous, but that had never, he believed, been done before. He did not describe the plan to me. My impression was that Mr. Elliot was to perform an operation with an alteration from the common mode, which would be safer. I think he stated that it had once been performed by Sir Astley Cooper."

"We certify that the above statements were made in our presence on the 19th of August, 1842."

"W. JACKSON, M.D.

"GEORGE TUNNISWOOD, M.D.

"JOS. CARTMELL, M.D."

After the preceding statements, it is quite unnecessary to offer any lengthy remarks on such a display of malignity and open disregard of truth as characterises the communication of Mr. Reeves, or to notice other more vague and equally groundless charges contained in it; and I trust that I shall never again be called upon, through the columns of your journal, to answer accusations of any kind from an individual whose own conduct, in the case of Mr. Boyd and Mr. Dacre, as reported in the *Medical Times* of April and May last, is yet marked by so disreputable a stain. In conclusion, allow me to say that the operation, performed in presence of Dr. Atkinson, Dr. Jackson, Dr. James, Dr. Oliver, my brother Dr. Elliot, and my pupil Mr. Fleming, was that of lithectomy, or cystectomy, so highly recommended by Dr. Willis; and that its result has fully justified the preference which, with the concurrence of my medical friends above-named, it received.

The opinion given by me as to the existence of one or more stones, and mentioned by the patient, was also stated to the medical gentlemen before the operation; and its correctness was proved on the removal of the calculus, which was found to be deeply fissured. As neither time nor space will now permit my entering into details of the operation, I must take another and an early opportunity of laying it before the profession, at such length as its novelty and importance demand.

THOMAS ELLIOT,
Member of the Royal College of Surgeons of London.

Carlisle, Aug. 29, 1842.

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SOLUT. MAGNES. BICARB.—Dr. WILKINSON, of Bath, whose well-known familiarity with Practical Chemistry entitles his opinion to respect, says,—

"A bottle of the Fluid Magnesia of Sir James Murray's sent to me for Analysis by a Chemist in this Town, gave me Seven Grains of Magnesia and Three of Sulphate of Soda to the ounce, whilst yours yielded Seventeen Grains of PURE MAGNESA to the ounce. I conscientiously bear testimony to the correctness of the above results." (Signed) "C. H. WILKINSON, M.D."

"Dated October 23d, 1840."

To Mr. C. DINNEFORD, Bond-street, London.

The above conclusive testimony is further corroborated by PROFESSOR BRAND, of the Royal Institution.

DR. PARIS, author of the Pharmacologia, and Mr. Morgan, of Dublin, who also examined and reported on Sir James Murray's COMPOUND.

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Emperor of Austria, and his Majesty the Emperor of Russia, having authorized and guaranteed several DISTRIBUTIONS of MONEY DIVIDENDS, by which large fortunes may be obtained, HEINE BROTHERS, at Hamburgh, are now selling genuine and warranted selected BONDS for the said Distributions. Persons desirous to purchase may receive, previous to giving any order, the prospectus, with full particulars upon addressing, without delay, a line to

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TESTIMONIALS.

From J. G. Andrews, Esq., St. Helen's-place, President of the Royal College of Surgeons.

I have worn for some time the new patent boots, called Impilia, with much comfort and satisfaction; I find the boots possess great elasticity, evenness of pressure, and I am enabled to walk a greater distance without inconvenience.

J. G. ANDREWS.

April 20, 1842.

From Anthony White, Esq., Parliament-street, one of the Council, and late President of the Royal College of Surgeons.

I can with much satisfaction recommend to the public the boot or shoe which is denominated Impilia. Its peculiar advantages over all other boots or shoes are, that it is impermeable to wet and damp, and always gives an agreeable and constant warmth to the feet; is also elastic, and is admirably adapted to tender and crippled feet from gout or other maladies.

ANTHONY WHITE.

April 6, 1842.

From Dr. Paris, of Dover-street, London.

I have examined and worn with comfort and satisfaction shoes constructed with intermediate soles of feet, to which you have bestowed the name Impilia. They undoubtedly possess an elasticity and capacity of adaptation to the form of the foot not possessed by ordinary shoes, and they have the rare merit of not creaking. They are, moreover, warm and dry.

J. A. PARIS, M.D.

From Dr. Roots, Russell-square, London.

Dear Sir,—I have now worn for some time a pair of boots with intermediate soles, which you term Impilia. They are admirably adapted for the ease and comfort of tender feet, and the elasticity of their tread is very pleasant. I can with confidence recommend them for general use, while for medical men they possess the very rare advantage of not creaking, and consequently are so desirable in a sick room.

H. S. ROOTS, M.D.

W. Baker, Esq.—April 25, 1842.

From Dr. Hodgkin, Lower Brook-street, London.

Having not only examined, but put to the proof of experience, the patent soles invented by my friend Wm. Baker, M.R.C.S., and termed Impilia, I have no hesitation in saying that they are a very decided improvement on the common method of construction. They are not only much more agreeable to the sole of the foot, but promote a warm and uniform temperature as well as freedom from damp, whether entering from without or derived from the feet.

THOMAS HODGKIN, M.D.

30—4, 1842.

From John C. Taunton, Esq., M.R.C.S., 48, Hatton-garden.

I have worn with satisfaction the boots with the intermediate soles of Impilia. They are worn with more comfort, adapt themselves better to the form of the foot, and are impervious to wet.

JOHN C. TAUNTON.

May, 1842.

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LECTURES ON THE ANATOMY AND PHYSIOLOGY OF THE NERVOUS SYSTEM.

By Professor OWEN, F.R.S., &c.

In the foregoing lecture we had to notice the diversified character of the molluscous type of the nervous system in the gasteropodous class, in which, if we compare the nervous system of of the *Aplysia* with that of the *Buccinum*, it will be seen that a direct progression in the development of the nervous system cannot be traced coincidently with the advance of the rest of the organization towards the cephalopodic type; but that there is a somewhat retrograde movement in approaching the lower testaceous cephalopods, as the *Nautilus*, by the order called pectinibranchiata. Upon the whole, however, it must have been observed, that there is a general tendency in the nervous system to aggregate in masses near the mouth: and we find, likewise, that the locomotive organ, or foot, advances as it were nearer to the head; so that the univalve mollusca which make the nearest approach to the *Nautilus* have been termed trachelipod, from the attachment of the locomotive disc to the part corresponding to the neck.

At the earlier periods of organic life in this planet, there appears to have been no trachelipods; their place was supplied by polythalamous cephalopods, of which the *Nautilus* seems to be the only surviving representative. The singularity of the whole organization of this molusc, is quite on a par with its rarity: organised according to the type of the cephalopod, it presents the lowest modification of that type, more especially in regard to its circulating and nervous systems. The brain is represented by a thick cylindrical commissure, connected by its extremities with two semicircular nervous masses, passing beneath the œsophagus, and completing an anterior and a posterior œsophageal ring analogous to those which we have described in several gasteropod molusca. From the middle and anterior part of the supra-œsophageal mass, small nerves are sent to the parts composing the mouth, one of which swells into a ganglion at the posterior part of the muscular mass. From the sides of the brain are given off a large and short optic nerve to the eye, and conspicuous branches also to the tentacles immediately contiguous. A small filament likewise penetrates the adjoining cartilage, to supply according to Mons. Valenciennes a cavity which he regards as the organ of hearing. The anterior-inferior œsophageal circle gives off the nerves to the numerous series of sheathed tentacles; two of these nerves form each a small ganglion, and supply a series of close set lammellæ, which I have compared with the olfactory organ in fishes. M. Valenciennes, however, prefers to consider a small hollow tentacle beneath the eye as the organ of smell. From the posterior œsophageal circle, or centre, numerous nerves diverge to the great muscles attaching the *Nautilus* to its shell, and likewise the visceral and branchial nerves.

In the cuttle fish, and other of the higher organized, or dibranchiate celhalopods, the part corresponding with the cord-like brain of the *Nautilus*, is developed into a large transversely oblong subbilobed mass, from which no nerves take their immediate origin, which here, therefore, assumes the character of a true brain: this is connected at the sides of its base, with another mass of nervous matter lying at the base of the cephalic cartilage surrounding the œsophagus, and in which the anterior and posterior rings can be recognized, although they have nearly coalesced. In the *Nautilus*, the cerebral centres were only in part protected by a cartilage: in the cuttle-fish they are enclosed for the first time in all the invertebrate series, in an internal cartilagenous skull—the commencement of a true endo-skeleton. The optic nerves are proportionally larger than in the *Nautilus*; they swell out into two enormous ganglions before forming the retina of the very complicated eye. Two nerves are sent off from the brain to the posterior part of the maxillary muscle, where they form two ganglions. The anterior œsophageal ring sends off nerves to a flat ganglion, lying immediately behind the pharynx, which is connected by a distinct nerve with the ganglion above. Ten large branchial nerves are also given off, which are analagous to those transmitted to the tentacles in the *Nautilus*. On each of these branchial nerves small ganglionic masses are developed, which do not involve the whole nerve. From the posterior œsophageal circle a large pair of nerves are sent backwards to the mantle, each of which divides into a gangleonic and non-gangleonic part; the non-gangleonic portion being principally distributed to the muscles of the fin. From this part of the nervous centre are likewise given off the infundibular, visceral, and respiratory nerves.

Such details of the nervous system in the inferior animals are deemed important, but not of the greatest importance. Unless they are systematized, compared with their analogues, and considered in reference to the general organization and powers of the species, they are not only unproductive, but cumbersome to the progress of science: for though the labour of a life be devoted to the acquisition of minute facts, yet, unless the mind be elevated to their relations, wherein is true science profited? We have now, for example, before us, a cephalopod with the brain reduced to the condition of a mere commissure. Another cephalopod in which, besides fulfilling the commissural functions, it forms a large independent superimposed mass. The latter has the means of acquiring many more ideas than the other, by its more highly-organized eyes, equal, if not superior, to those of fishes; it can perceive many things to which the other must be blind. The cuttle-fish, and other naked cephalopods, have a powerful active muscular system and well-organized fins for swimming. They are not encumbered, like the *Nautilus*, with a heavy shell; and thus have the conditions of their circulatory and respiratory system raised to meet the exigencies of their muscular exertions. Thus their relations with external nature must needs be much more varied and extensive than in the *Nautilus*. With a faculty to discern danger, they have the power of avoiding it. To them, therefore, a protective shell would be not merely cumbersome but unnecessary. The *Nautilus*, on the contrary, to which much more simple visual organs have been allotted, presents a muscular and respiratory system on a correspondingly low scale; and is compensated by the possession of an exterior defence and dwelling, into which it can shrink in periods of danger. Hence, therefore, the difference which the central nervous masses present in immediate relation to the different range of ideas in these two types of the highest order of the molluscous, and invertebrate animals.

ORFILA'S LECTURES ON ARSENIC.

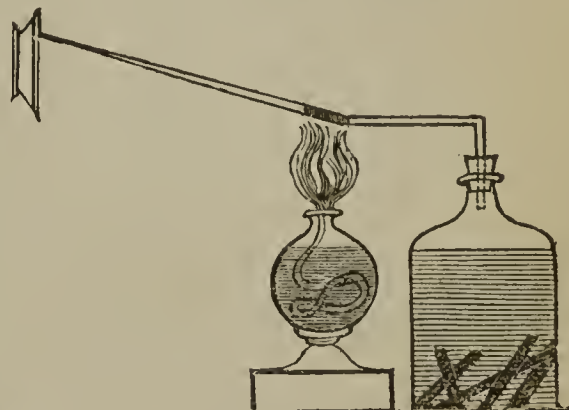
Containing an Account of the different Operations performed upon the Body of Laffarge. Collected and Translated by JOHN DAL PIAZ, Pharmacien and Laureate of the School of Paris.

LECTURE V.*

GENTLEMEN,—In my last lecture I exhibited to you the principal modifications of Marsh's apparatus; you have witnessed the inconvenience attached to each of them, and you have examined the use I make of them. I shall now again briefly mention my method of charging it.

I first introduce the pure zinc with a small quantity of distilled water; I then add pure sulphuric acid in sufficient quantity to produce a quick reaction. It is necessary to proceed in this manner, when acting upon pure zinc. If all the water be added at first, the reaction does not occur so quickly, which might induce the experimenter to increase the quantity of sulphuric acid, thereby producing a tumultuous disengagement a little later.—It is almost useless to say that in such a case a portion of the liquid must be taken out, and replaced by distilled water; but this is precisely the evil to be guarded against. Suppose the suspected liquid had been introduced, we should then not only have a loss of the gas, but should be under the necessity of diluting the liquid, an inconvenience which ought always to be avoided. Another important thing to be remembered is, to add distilled water in sufficient quantity to nearly fill the apparatus, thus leaving only a small space for atmospheric air, which, if not thoroughly expelled, might produce an explosion when the gas is inflamed; this fact naturally tells us the gas ought not to be ignited immediately: the first portions combined with atmospheric air should be allowed to escape. Finally, the sulphuric acid should always be added in such a proportion as to render it necessary, after a short time, to make a further addition.

It is now well understood if the liquid introduced contains an oxygenated arsenical compound, arsenuretted hydrogen will be formed; consequently, by disposing the apparatus in the following manner, all the arsenic may be obtained in the metallic state.—Instead of the tube we generally make use of, introduce in its place another one, having a much longer horizontal branch, and made with the least fusible glass; let it be slightly bent at about one third of its length, and at that part introduce a certain quantity of asbestos, just as you see in the one I now place before you: the superior extremity of course, is to be terminated in a fine point.



If I now heat the asbestos by means of a spirit lamp, the gas will be decomposed, and a ring of metallic arsenic will be deposited at a short distance from the asbestos. Again, by igniting the gas at the extremity of the tube, and presenting a porcelain capsule to the flame, we shall have condensed the last portions of the metal which may have escaped the decomposition.

Monsieur Devergie has strongly recommended

• Before beginning this lecture, Monsieur Orfila again exhibited the dog upon whom he performed the ligature of the œsophagus. The animal was in good health.

the use of chlorhydric acid in place of the sulphuric acid, for two reasons. First:—that it corrodes the zinc much easier, and secondly, because sulphuric acid may be arsenical.

For my part I prefer the sulphuric acid; 1st.—because the action it produces is not so violent; 2d., because it produces a disengagement of gas for a much longer time; 3d., because it corrodes the zinc just as well as chlorhydric acid, when it is added to this metal in the manner I have proposed; and 4thly, because it is not so susceptible of producing zinc stains, which, by their appearance, might mislead an inexperienced operator.—When treating upon the impurity of tests, I hope to refute successfully the statement of Monsieur Devergie, relative to the arsenic contained in sulphuric acid; and when treating upon the different stains which may be produced by Marsh's apparatus, I shall prove to you the inconvenience of using chlorhydric acid in preference to the sulphuric. Nevertheless, I do not mean to say that by using sulphuric acid zinc stains cannot be produced, but I assert, if such a circumstance does occur, it is in consequence of the too great length of the flame.

Monsieur Lassaigue's Procedure.—In a memoir read by Monsieur Lassaigue at the Royal Academy of medicine, this chemist stated that by operating according to our method, a great quantity of arsenuretted hydrogen might be lost, and to prevent this loss, he proposed the following procedure, which I may say, *en passant*, is not his own, but was originally described by Monsieur Simon.—It consists in converting all the metallic arsenic, associated with the hydrogen, into arsenious acid, by means of a neutral solution of nitrate of silver. In this case a black precipitate of metallic silver is produced. The liquid is then filtered, and as it still contains nitrate of silver, chlorhydric acid is added, which precipitates the whole of this metal as a chloride of silver; this last precipitate must afterwards be separated by filtration.—The liquid thus obtained is then decomposed by sulphuretted hydrogen, and the metallic arsenic is extricated from the sesqui-sulphuret by means of charcoal and carbonate of potash.—This mode of proceeding is certainly not a bad one, it is very ingenious, but unfortunately very complicated, and can only be adopted in cases when strong doses of the poison are to be acted upon; this alone is sufficient to prove its inferiority to Marsh's apparatus.

Arsenical Stains.—Gentlemen, we have already spoken of the property which arsenic possesses in uniting with hydrogen to form an arsenuretted gas, and you have particularly noticed the stains formed when a cold body is presented to the flame of this gas.—These stains have performed an important part in toxicology; it is, therefore, necessary we should devote some time to their study, and we ought to apply ourselves to well recognise them, and in particular to distinguish them from the stains produced by various metallic salts, or even by the combustion of animal matter.—Numerous objections have been made against arsenical stains collected upon a porcelain plate. Is it, say they, because you obtain upon a porcelain plate, certain brilliant stains of a yellow, brown, or black colour, that you conclude this or that substance contains arsenious acid, that you come with such proofs only, to demand the head of the accused, and affirm upon your oath that arsenious acid has been administered? Why! this is as bad as murdering the prisoner; it is a pretension very great on the part of science, and its infallibility may be reasonably contested!—Let us examine then, if this pretension with which toxicological science is reproached is well founded, and whether we cannot affirm that poisoning by arsenious acid has been effected, from the proofs alone afforded by stains.

Physical and Chemical Characters of Arsenical Stains.—The colour of arsenical stains as collected upon a porcelain capsule, will vary in proportion to the quantity of arsenious acid contained in the solution acted upon. If the arsenious acid is in a large proportion, they are black, and may be brilliant; generally they are without lustre. If, on the contrary, the proportion of arsenious acid is small, they are yellow and brilliant. They do not absorb the moisture of the atmosphere; nevertheless, if they are to be preserved, it is necessary they should not be exposed, they may then be kept

several months without undergoing any alteration. Thus it was when we had to make our experiments before Monsieur Raspail and the tribunal of Dijon, we found our arsenical stains, which had been kept free from atmospheric contact, in a perfect state of preservation. The results of these experiments were such, that Monsieur Raspail, who had stated these stains not to be arsenical, admitted before the tribunal that he considered them as such, and no longer entertained the least doubt of it.—Arsenical stains may be readily volatilized by a gentle heat, such as is produced by a jet of inflamed hydrogen. This character alone is nearly sufficient to distinguish them from antimonial stains, which, under the same conditions cannot be volatilized, even at a much higher temperature; nevertheless, when the heat is applied a long time, the antimonial stains may disappear, in consequence of the metal forming a white oxide: in this case a dexterous operator may make them reappear, by reducing this oxide with another part of the same flame. They might in this way be made to appear and disappear successively for any length of time.—Arsenical stains, when submitted to the action of cold nitric acid, are immediately effaced, although not entirely dissolved, for when carefully observed, small white particles may be seen floating upon the surface of this liquid; if then a few drops of chlorhydric acid be added, and a gentle heat applied, the whole will be dissolved and converted into arsenic acid, which may be obtained by evaporating the solution to dryness.—Much advantage is derived from this mode of operating, in consequence of the arsenical stains being converted into arsenic acid, which is fixed, and very soluble, the chlorhydric acid, at the same time, destroys the organic matter contained in many sorts of nitric acids, even when they are well rectified, and when such is the case the acid, when evaporated to dryness, would produce a carbonic residue, communicating a dark colour to the arsenic acid, which ought to be as colourless as possible, when it is to be acted upon by nitrate of silver, for the purpose of obtaining the brick-red precipitate. The arsenic acid thus obtained must be tested with one or two drops of a concentrated solution of nitrate of silver, or by touching it with a crystal of the salt itself; if too weak a solution is made use of, we may have no precipitate formed, or the colouration may be so slight as to render the case doubtful. It is almost unnecessary to say the red precipitate is an arseniate of silver.—Should the colouration not appear immediately, you might perhaps feel inclined to heat the mixture, thinking to hasten the decomposition; this should always be avoided, for it is well proved that nitrate of silver alone is sufficient to form a reddish residue when submitted to the action of heat.—This mode of proceeding by nitrate of silver is certainly one of the most satisfactory. By its aid alone I can detect arsenic from a single stain, provided it be one of the largest size, and, please to remember, this is not equal to the one hundredth part of a drop of a concentrated solution of arsenious acid, this same drop containing only one hundredth part of a grain of dry arsenious acid; consequently, by nitrate of silver, &c., we are able to detect one ten thousandth part of a grain of this poison.—Another experiment consists in dissolving a dozen of the stains in nitric acid, then evaporating the solution to dryness, and the residue boiled in distilled water will yield a yellow sulphuret of arsenic with sulphuretted hydrogen; finally, this sulphuret is decomposed by charcoal and carbonate of potash, thereby producing an arsenical ring.—Let us now examine the stains which might be mistaken for those of arsenic. We will commence first with those of Messrs. Flandin and Danger, as they have been most talked of; it is even said the prisoner's counsel intend making use of them to defeat the experimenting chemists in another case of poisoning by arsenious acid, now pending before the tribunal of Tulle.—According to these gentlemen, these stains are produced by the action of Marsh's apparatus upon a sublimable saline compound, which is often formed when animal matter is imperfectly carbonised, and which is a mixture of sulphite and phosphite of ammonia.—Yellow brilliant stains may be formed by introducing into Marsh's apparatus a mixture composed of six of grains sulphite of ammonia, six grains of

phosphite of ammonia, and eighteen drops of oil of turpentine: there is nothing surprising in this, since the substances by which they are produced are sublimable. The carbon of the oil of turpentine probably combines with the sulphur and the phosphorus of the two salts, thereby forming stains of a light or dark colour, in proportion to the quantity of carbon contained.—The stains thus produced are not soluble in cold nitric acid, whilst those of arsenic instantly disappear when in contact with this acid. To obtain a solution of Messrs. Flandin and Danger's stains in nitric acid it is necessary to have the aid of heat; even then they must be detached from the surface of the plate with a glass rod: moreover, it is quite false to say that when treated by nitric and chlorhydric acid, (as with arsenical stains) a brick red precipitate is formed when tested by nitrate of silver.—But I will go still further, and, for the sake of argument, admit their identity with arsenical stains, which is an absurdity. I beg to ask these gentlemen how they obtain them, and whether they could be produced by adding their saline compound to organic matter, which is afterwards carbonized by nitric acid? Certainly not! For this reason:—the oxygen of the nitric acid would convert the sulphurous and phosphorous acid into sulphuric and phosphoric acids.

Sulphur Stains.—The stains produced by sulphur with Marsh's apparatus are yellow and opaque; they have not the least analogy to those of arsenic, and in that respect it is impossible to form an erroneous conclusion. They readily dissolve in nitric acid, which converts them into sulphurous acid.

Phosphorous Stains.—They are of a brilliant brown colour, and deliquescent; for after being exposed a short time they are converted, by the oxygen of the air, into phosphoric acid, which will reddens the tincture of litmus.

Bromine and Iodine Stains.—Bromine, introduced into Marsh's apparatus, might produce stains, but their extreme volatility renders it impossible to fix them upon a capsule. The same may be said of iodine. Although these stains cannot easily be mistaken for those of arsenic, there are others which do not offer the same advantage: we shall now speak of them, commencing with

Zinc Stains.—These may be produced when the action within the apparatus is too intense, which always happens when too much sulphuric acid has been added. This may be indicated by the strength of the flame. In this case, small portions of the sulphate of zinc are mechanically carried off by the rapid current of gas, and, being decomposed by the same, metallic zinc is deposited in the shape of stains. This fact was first observed by the commission of the institute, when Monsieur Dumas, who was one of the members, proposed to introduce asbestos within a certain part of the tube, to prevent the passage of this salt. Zinc stains are generally produced when Marsh's apparatus is made to act by means of chlorhydric acid. It is really very unfortunate that Monsieur Devergie should have pronounced this acid to be the best for Marsh's apparatus. I might cite as a convincing proof, the occurrence which took place, not long since, in the department of L'Arriège, during a legal investigation.—In whatever way zinc stains may be produced, they have in their appearance a great resemblance to those of arsenic: the following characters are, however, sufficient to remove all doubts upon the matter:—1st. They are not volatilized by the heat of an inflamed jet of hydrogen.—2nd. If to their solution in nitric acid, a few drops of chlorhydric acid be added, and the mixture be then evaporated to dryness, no brick-red precipitate will be produced by the action of nitrate of silver.—3rd. Their nitric solution affords no yellow precipitate with sulphuretted hydrogen.

Antimonial Stains. * — Oxigenated antimonial

* The reader will observe, in the next lecture, that Monsieur Orfila did not enter into any details respecting these stains, reserving what he had to say about them until he had arrived at that part of his lectures when antimony is to be examined. I have thought it quite necessary to extract the subject from that part and insert it here, immediately after the zinc stains

compounds, when introduced into Marsh's apparatus, produce stains of which I have already spoken: they are of a brilliant blue colour, and are not sublimable; the cause of their occasionally disappearing when presented to an inflamed jet of hydrogen, has been before explained, together with the method by which they may be reproduced.

This plate I present to you is covered with stains obtained from the urine of a female who had been taking daily, by prescription, large doses of tartar emetic. They readily dissolve in nitric acid, and the solution, when evaporated, leaves a residue entirely composed of antimonious acid: this residue, though insoluble in water, is readily dissolved by the addition of chlorhydric acid, and this solution, treated by sulphuretted hydrogen, yields a red precipitate of hydrated sulphuret of antimony.—By submitting an oxygenated antimonial compound to the influence of Marsh's apparatus, a metallic ring may be obtained, which, instead of being deposited a little in advance of the asbestos, will be found in the very part containing this substance: a certain part of the metal will even be condensed in the asbestos.—Finally, a solution of antimonial stains in a mixture of nitric and chlorhydric acids, does not, by evaporation, yield a residue capable of giving a brick-red precipitate, when acted upon by a saturated solution of nitrate of silver; on the contrary, no action whatever takes place.—Stains may be produced from many other metals under the same conditions; for example, the plates I present to you are covered with the solutions of several metals. If I direct the inflamed jet of pure hydrogen upon either of them, the salt is decomposed, and we have a deposit of the metal. In this way may be obtained stains of lead, copper, silver, gold, platinum, &c.

Gentlemen, it now only remains for me to notice another sort of stains, which may be easily produced by presenting to the inflamed jet of hydrogen a common pipe-clay plate, instead of a China one. This fact occurred a short time since, and had nearly caused the experimenters to render a false judgment.—The stains I allude to are lead stains, and are produced by the decomposition of the glaze covering the plate, which contains a large proportion of oxide of lead. The inflamed hydrogen combines with the oxygen united to the lead, thereby isolating the metals which appear under the character of brown stains. We conclude, of course, from this, that common plates ought never to be used; nevertheless, this effect can only be produced by a very powerful flame.

REMARKS ON THE NATURE AND PROPERTIES OF SECALE CORNUTUM.

By CHARLES CLAY, Member of the Royal College of Physicians, London, &c., and Lecturer on Medical Jurisprudence, &c. Manchester.

(Concluded from page 356.)

IN some particular cases a little deviation from some points of the above principles might be admitted, and still its exhibition may be justifiable. It would be well, however, to bear the principles well in mind, and confine practice as near to it as possible: under such views few errors ever could arise. I have always been guarded in giving it in first labours, believing it to be rarely required. In manufacturing districts there is a laxity of muscular fibre, a constitutional debility prevailing with liability to hæmorrhage which renders the application of the secale cornutum more general than in other districts, still I am inclined to be of opinion that many use it when quite uncalled-for; a practice highly pernicious. Whilst on this subject, I cannot refrain from quoting a remark from "An Essay on the Chemical, Botanical, Physical, and Parturient Properties of the Secale Cornutum," by T. H. Wardleworth, in which he says, "Out of 357 cases of head presentations, in which I have administered the ergot of rye, in every stage of parturition, in all states of dilation of the os uteri, and in many instances of the first child, I never had the slightest reason to regret its exhibition, or believed that it acted injuriously on the mother or the child, except in two cases." On this remarkable passage, Braithwaite, in his "Retrospect of Medical Journals," very justly observes, "that if the above opinion go forth to the world, and especially to young practitioners, and be acted upon, it will be the cause of considerable mischief. It is almost the only opinion

on which we disagree with the author, but it is important for every one to know, that *whenever the ergot is given too early in labour*, and whenever any obstruction exists to the ready passage of the child downwards; such as a narrow pelvis, a rigid, or contracted os uteri, or rigid external parts, the life of the child will be endangered even by a moderate dose of the ergot." With this opinion I fully concur, a more unfortunate axiom could not have been published, or one fraught with greater danger, and the author must have had an extraordinary run of good luck to have had 357 cases, without some such anomalies existing.

In respect to uterine hæmorrhage, I do not recollect a case subsequent to delivery, where the secale had been administered, and I believe it to be one of the best preventives to that often serious termination of labours.

I am also of opinion that the full powers of secale cornutum are best developed only at the full period of utero gestation, its exhibition is then attended with the most certain and satisfactory results. That it has been given for, and frequently effected, abortion and premature menstruation, yet I believe it is an uncertain remedy at best, and more frequently fails than otherwise in such cases. American authors have extolled its powers in puerperal convulsions, but I imagine great judgment will be required before it can be resorted to under such circumstances, it can only be justifiable under very peculiar circumstances, for which the general rule of cases to which it is applicable, will be a sufficient guide. That the exhibition of the secale cornutum has been unsuccessful in the hands of the best practitioners in the best selected cases I do not for a moment doubt, and that such cases have furnished strong arguments against its use; but that this has arisen from the defects in the preparation before hinted at, or the badness of the secale cornutum itself, I feel no doubt. When kept for more than a year after its growth, its properties, as a stimulant, are nearly, if not altogether destroyed; whilst its narcotic principles remain; these are sufficient, independent of cases to which it is inapplicable to bring it into unmerited disrepute. If the ergot of shops, fails to produce the desired effect, let the fault lie where it ought, not on the remedy, but on the vender and purchaser; it is absurd to suppose that ergotized rye of two, three, or four years old, can retain those powers for which it is celebrated when recent, and which are so easily perishable. In those countries where rye is extensively grown and in use for food, when ergotized to any extent, the bread made from it is highly pernicious, often proving fatal. To this the epidemic which raged to such a fearful extent in Germany in 1770, was attributed. These are sufficient proofs, in addition to those of infant asphyxia, shewing the poisonous properties of this drug, and how necessary it is to use such preparations of it as will secure its stimulant properties, and at the same time reject its narcotic principles. Robert attributed these effects to the hydrocyanic acid it contained. Vauquelin, Pettewkofer, and Winkler agree with Robert as to its presence, but differed with him as to quantity. All authors agree on its rapid tendency to putrefaction, and that its powers, as a stimulant, disappear when the putrefactive stage commences. This is evident throughout the whole of these observations. It is, therefore, absurd to give long kept secale cornutum with the intention of promoting uterine action, and equally so to condemn its powers (when properly selected and applied) as a stimulant of the most valuable character. Thus for many years I was convinced from practical application of two distinct properties existing, and of a very different character from each other, and so opposed to each other as to render nugatory the stimulant effects by the preponderating influence of the opposite principles in secale long kept, and only to be combated in recent specimens by adopting a watery menstruum, which retains the wished-for effect, without holding in solution the opposing power. I felt much gratified when my practical conclusions were borne out by the chemical discoveries of M. Bonjean, which are to this effect, "That there are two principles in the secale cornutum, one remedial, the other

poisonous. The remedial is a reddish brown extract, very soluble in hot water, possessing in a high degree those properties by which it has long been known to obstetricians. The poisonous is a fixed colourless oil, very soluble in cold æther, but insoluble in boiling alcohol or water, in which alone resides the poisonous properties of the secale cornutum." From this, it is evident that a watery menstruum only is capable of holding, in solution, those powers we desire, viz., as a stimulant, without being connected with its poisonous qualities. The perishability of its powers as a stimulant, renders it imperatively necessary that the secale cornutum should be as recent as possible, never going beyond one year after its growth.

Giving it in substance combines the two properties, one of which I have shewn is highly injurious, and, therefore objectionable, and in old secale much more so, as the principle sought after is separated from it, and the narcotic reigns supreme. If, then, its power as a stimulant, can so easily be isolated from its opposite principles, though present in the secale, it is no longer justifiable to give it in any other form but as infusion or decoction, the latter being preferable as to time. By following the directions here advised, all the cases to which the secale has been applicable, will be found to be more successful, and the dose may be pushed further in proper cases without ill consequences ensuing. As the poisonous effects of the secale are known to act rapidly on animals, every means should be secured to avoid those principles which evidently are not required, and are capable of doing great mischief, as well as defeating the intentions of the practitioner as to the object in view. The following observations will shew that other gramineæ become ergotized as well as rye, possessing properties very similar, but I think not so effective. I feel no doubt but that the small spurs of the secale cornutum, sold in shops, are many of them the ergot of other gramineæ than rye mixed with it. "In the neighbourhood of Trois Croix, this season, 1841, there has been an epidemic of abortion among cows, which has caused consternation among the farmers. M. Bodin discovered that the rye, as well as other gramineæ, was extensively ergotized, thus producing the abortion." *Journal de Méd. et Chirurg. Prat. &c.*, 1841. On this the Editor of the *Edinburgh Monthly Journal* observes, "We are not aware that any experiments have been made with the ergot of any of the gramineæ, excepting rye, which, if true, is surprising, as many other individuals of the family are subject to ergot. Phœbus enumerates thirty-one grasses liable to it. Pereira says, in 1838, nearly all the grasses in Greenwich marshes were found ergotized. It is not, however, confined to the gramineæ, the cyperaceæ are subject to it, and, perhaps, the palmaceæ." There is some probability, therefore, that the ergot of other gramineæ than rye is mixed with it, to increase its quantity, as it evidently does also depreciate its quality; from repeated experiments, the smaller spurs of shop-ergot are very deficient in power as a stimulant; this, however, might also arise from the immature state of the spurs of real ergot; a good preventive is to reject the small spurs, as I believe that rye produces the largest spur, and by selecting the largest, we not only reject the immature rye ergot, but also the ergot of other gramineæ, most of them being very much smaller, but all of which are added as adulterations, against which the practitioner in medicine finds some difficulty to protect himself. There are two circumstances in reference to the application of the ergot that deserve very particular notice, and will form a very proper conclusion to the important question, the first is the physiological fact, that during the progress of parturition two distinct and diametrically opposite functions are brought into operation, the one commencing some time after the other has been established. The one, that is the first of these actions, is confined to the os uteri, cervix, and parts adjacent, the peculiar properties of which are to dilate the os uteri; to accomplish which effectually, it appears necessary that the lateral walls and fundus uteri should be comparatively in a state of quietude until a certain amount of dilatation is procured. Then the second action is set up in the walls and fundus uteri, very different from the preceding, and is

that of powerful contraction and expulsive effort of the uterus to get rid of its contents, for the proper result of which a certain amount of dilatation should have preceded at the uterine orifice. When the second action is begun, the first has, in a great measure subsided, or in other words, the dilatation is nearly, if not completed; hence when this change takes place in the uterine action, we invariably hear the patient complain less of pain in the abdominal, and more in the lumbar region, where previously it was more in the abdominal, and less in the lumbar region; reflecting carefully on these results, I am led to the second circumstance, *how the secale cornutum acts injuriously when given prematurely*, that is, when there is not sufficient dilatation of the os uteri. From long observation, I am now convinced that in a vast majority of cases, where there is a cessation of pains, arising from whatever cause it may, *that cessation takes place most usually at the termination of the dilatating pains, the debility, or other cause, preventing the second action from coming on to exert the expulsive force.* Hence how frequently do we hear of the first pains of labour after a time almost, or altogether subsiding, and this for a considerable time, inducing the medical attendant to leave his patient, when, on a sudden, powerful expulsive efforts come on, and the child is born without any one being present. It is only when dilatation is in great degree, or entirely, affected, and the pains have almost, or entirely, subsided, that the secale cornutum can be given justifiably. From what I have observed of the action of the secale cornutum on the uterine fibre, it appears to be decidedly and specifically on those parts of the uterus designed for the expulsive effort (the walls and fundus uteri), that its action being, therefore, contrary to dilatation, *that must of necessity be previously secured before the secale is given, and although it acts thus directly in increasing the expulsive efforts, it also acts injuriously on the os uteri and cervix, for if those parts be not well dilated, though it does not dispose them to contract again, yet it prevents further dilatation, or, at least, renders that process very slow, accompanied with heat, rigidity, slight thickening, and in consequence thereof considerably retarding what, under proper circumstances, would certainly have been expedited.* Thus the time of the accoucheur is often consumed by the ill-timed application of means calculated to effect speedy delivery, if given with judgment. Independent of asphyxia arising from the deleterious nature of the secale cornutum when given in substance, to which I have adverted, I have no doubt asphyxia might arise from pressure in consequence of giving the secale cornutum prematurely—that is, by exciting the propelling fibres of the uterine mass before dilatation is sufficiently effected, consequently the pressure upon the brain of the fetus by the rigid os uteri is quite sufficient, and of too long continuance *not to produce asphyxia.* In some remarks by G. Patterson, Esq., of Aberdeen, in the *Edinburgh Med. and Surg. Journal* for Jan. 1840, I am fully borne out in this view of asphyxia, and I think if that gentleman will peruse the foregoing remarks, he will not only find out the cause why so many cases of asphyxia occurred to him, but the way to lessen the number in future: having only seen an abridged account of the paper of Mr. J. Patterson, I cannot ascertain in what form he used the secale cornutum, but I little doubt it was in substance. The editor of the *Retrospect*, 1840, differs from the view entertained by Mr. Patterson and myself as to asphyxia being caused by pressure on the foetal brain; he says, “We know that the head of a child may be pressed upon very severely for a very considerable period, and yet the child will generally be born alive,” &c. This is certainly true, but there is a wide difference between a pressure against a yielding and an unyielding body. The editor further observes, that the secale, if given in large doses, produces uninterrupted action, which is the cause of mischief, and which would be obviated by a moderate dose, producing pains with intervals of rest between. I must confess, with all my experience, I am not prepared to admit this view. I believe however moderate the dose, *if effectual*, it produces uninterrupted action in the lateral walls and fundus uteri, but not in the cervix, or os uteri, &c. Again the editor observes, if we

give the secale in immoderate doses, we as certainly kill the child. I aver, and have seen very many cases, to prove that this view is fallacious. *If the dilatation is sufficiently effected on the os uteri, and other circumstances are sufficient to warrant the exhibition of the secale, I maintain a very large dose has not the bad effect on the child if given as a decoction; but if given in substance, Asphyxia may arise from two causes, the deleterious principle of the ergot in substance, or long pressure on the brain, when given under improper circumstances.* The editor alluded to gives his opinion that the cause of asphyxia is owing “to the stoppage of the circulation through the vessels of the womb and consequently the want of proper oxidation and decarbonization of the foetal blood.” This is a very novel view of the matter, and deserves notice for its ingenuity; but, in my opinion, would require as a cause much longer to effect the death of the fetus, than the average time of such cases presents to us. If the view I have taken in the early part of this essay be correct, *the circulation of blood in the uterine mass cannot be so far impeded as to cause the death of the child, for the uterus is never as a whole in a state of action.* When the dilatating pains are at work, the vessels in the walls and fundus are not affected, and when the propelling pains are present, there is sufficient amplitude in the uterine vessels about the cervix, &c., for the preservation of the child's life. I believe this theory of asphyxia, though ingenious, not clear, and as to oxidation and decarbonization, it is easy to assert and maintain it, but of too obscure a nature to prove. I think very much will depend as to what part of the uterus the placenta is attached, and what pains are at work at the time to account for asphyxia on the principle of impeded circulation. I cannot conclude this paper without calling the attention of the profession to a preparation described by Dr. G. O. Rees, and recommended by J. C. W. Lever, Esq., in the *Medical Gazette*, viz., the ethereal solution, on which I would briefly remark that I would earnestly caution practitioners against its use, simply because all the modern researches in chemistry, particularly the important ones by M. Bonjean, already alluded to, prove that the *poisonous properties* of the secale are *soluble in cold ether*, and, therefore, though it may have some stimulant effects (probably no more than the ether itself), it is highly objectionable, and since the stimulant powers can so easily be extracted by water, as proved by the ablest chemists, without the slightest admixture of the poisonous effects, there can be no reason why we should use a more dangerous, as well as a more expensive, remedy. I still maintain what I have done from the first of these remarks, that a proper preparation of a well selected article, and given under proper circumstances, will never cause any disappointment to the practitioner.

EDINBURGH UNIVERSITY. — Dr. Allen Thompson and Dr. J. Hunter Lane, of Lancaster, and Dr. Reid, of St. Andrews, are amongst the Candidates for the Edinburgh Chair of Physiology.

STEAM BALLOON.—A French paper states that an ingenious mechanic of Nuremberg is constructing, by means of a subscription which has been raised to aid him, a steam-balloon of metal, calculated for the accommodation of any number of persons, from three to fifty, with provisions for fifteen days, and which he expects to guide as he pleases. Full particulars are given, with which, however, we do not think it necessary to trouble our readers; and skilful engineers who have examined the machine are said to have no doubt of the possibility of completing this new mode of transport, which, hereafter, will render useless high-roads and railroads. When this mode of transit shall have reached perfection, and conveyance companies, abandoning the highways of the earth, shall conduct their speculations—as another and less material kind of speculators long have—in *nubibus*—the world may fairly think itself *in train* for recovering back some of those lost hopes, and frustrated wishes, and perished projects, of which, according to Boccaccio, the moon has been the great storehouse for so many weary and baffled generations.—(From *The Catholic*, a new journal of great literary merit.)

ON ORIGINAL DISLOCATION OF THE FEMUR.

By J. NOTTINGHAM, Esq., Surgeon.

(Continued from page 357.)

SIDE by side with this fact, so characteristic of double and original luxation of the thigh bones, we will report another exceedingly curious, which seems to shew that this malformation may be transmitted to many individuals of the same family or stock. There exists (says the author of this communication) in the town of Mantua a family, of which several individuals have been and are affected with original luxation of the thigh bones; the oldest member of this family is a female who has attained the age of 80 years, Margaret Gardas, a dealer in fruit. The following facts were stated by her and corroborated by people of the same age:—

Two of her aunts, on the mother's side, who died each at the age of 70 years, were lame from their earliest infancy; they, themselves, used to say that they had always been lame; their hips were large and projecting, and they walked with the elbows directed backwards, and waddling like ducks. The father of Margaret had a sister lame from her birth on the right side, who died at the age of 80 years. Another sister, who was not afflicted with this malady, gave birth to a daughter, who had a shortening of the leg.

Margaret Gardas, the object of this note, is a tall and robust woman, verge large, with much colour in her cheek, and appears to have been remarkably active in early life. In her case the disease only appeared at the age of 30 years, and its symptoms are those of spontaneous luxation of the femur. The limb affected is smaller than the other by about a quarter of its diameter, while it is longer than the sound limb by three or four lines.

This woman was married to a man from a distant neighbourhood, healthy and well formed, and afterwards had a daughter named Sineone, who has a congenital shortening of the right lower limb of about three inches. This young woman was also married to a healthy man, but his father had suffered from congenital luxation of both the thigh bones; she bore four children, two of whom had this hereditary malformation; one is a daughter aged 23 years, who has luxation of the hip on both sides; the head of each bone is upon the dorsum of the ilium; the other is a son, aged 21 years, who has congenital luxation of the left thigh; the limb is five inches shorter than the other; the head of the femur is directed upwards and backwards, while the great trochanter projects forwards and outwards; the point of the foot is turned inwards. The nutrition of both limbs is the same.

The characteristics of this luxation, as of all those where the head of the femur is carried upwards and outwards are; shortening of the affected limb; ascension of the head of the bone upon the dorsum of the ilium; projection of the great trochanter; retraction of nearly all the muscles of the upper part of the thigh towards the crista of the ilium, where they form around the head of the femur a kind of cone, of which the base is upon the ilium, and the summit at the great trochanter; the tuberosity of the ischium, abandoned by its muscles, is felt immediately beneath the skin; rotation of the limb inwards, and by consequence direction outwards of the ham and of the heel, while the knee and point of the foot are directed inwards; obliquity of the thighs, from above downwards, and from without inwards, which is increased with advancing years, and as the pelvis attains a greater breadth; hence there is a tendency of the thighs to cross one over the other below; the thigh is joined to the pelvis above at an acute angle; atrophy of the entire limbs, particularly of the upper parts.

The isolated movements of limbs so conformed are in general very limited, but those of abduction and rotation are more especially so; hence the numerous difficulties in standing, walking, and in the various exercises in which the lower limbs take part.

In the upright posture we are struck at once with the want of proportion between the upper and lower parts of the body, with the imperfection of the

lower extremities and with the attitude of these individuals. The trunk is well developed, while the lower limbs are small and short, as if they belonged to an individual of less stature. The short and small limbs are rendered more striking by the breadth of the pelvis, which has received its natural development, while the projection of the trochanters is surprising.

With regard to the attitude, it may be observed that the upper part of the trunk is bent considerably back, the lumbar portion of the spine projects forwards, and has a corresponding hollow behind; the pelvis is placed nearly horizontally on the thigh bones; the sufferers only touch the ground with the point of the toes; a fact which is evidently the result of transposition of the ilio-femoral articulation, and of the centre of motion being removed to a more distant point on the outside of the pelvis.

When persons with such malformation commence a walk, they are seen to raise themselves on the point of the toes, and then to lean the upper part of the body towards the limb which is first to support their weight; they then raise the opposite foot from the ground, and seem painfully and alternately to throw the weight of the body first on one limb and then on the other. In fact, each time that this change takes place, the head of the femur which receives the weight of the body, is elevated upon the dorsum of the ilium, while the pelvis is lowered, and on one side all the signs of displacement become more evident, while they diminish in the same degree on the other, until the moment when the latter limb receives the weight of the body in its turn; then we see the signs and the effects of displacement change sides, being now most remarkable where they were the least evident a moment before. It is by this succession of efforts that the weight of the body is passed from one limb to the other. It is evident that the cause of these painful efforts is in the want of fixity of the head of the femur, and in the continual displacement which it undergoes, in consequence of which the heads of the thigh bones are alternately elevated and depressed, accordingly, as one or other of them may sustain or be freed from the weight of the body.

At first sight it appears singular that running and leaping are effected with less difficulty than mere walking. This is nevertheless the case, for in this kind of locomotion, the energy of muscular contraction, and the rapidity with which the weight of the body is transmitted from one limb to the other, render the effects of the want of an acetabulum and of a point of fixity for the head of the femur, almost insensible. We remark, indeed, in the running of these patients a greater balancing of the upper parts of the body, and a greater twisting of the pelvis on each side, in short, a more laboured movement of the weight of the body from one limb to the other; but yet all that appears to be painful in running vanishes almost entirely in leaping: but this is somewhat a different thing, and as in certain animals without limbs, the body is bent first, to straighten itself suddenly afterwards, in the manner of a compressed spring, and then bounds to a height or a distance through an extent which is greater or less according to circumstances. But such a fatiguing mode of locomotion does not admit of being long maintained; the displacement, the friction of the head of the femur, and the awkward balancing of the body in walking, with the great effort of the muscles in running or leaping, do not fail to bring on a state of extreme lassitude, which calls for repose, and this lassitude is the more readily felt when the weight of the upper parts of the body is greater than usual.

When patients afflicted with this infirmity are placed horizontally on the back, we are surprised to find that the symptoms of their disease become more faint, and are even almost effaced, which is accounted for, when we consider that in this state of repose the muscles cease to draw up the thigh bones, and the weight of the upper parts of the body drives downwards the pelvis as a wedge between them.

That which serves to put the truth of the explanation beyond doubt, and also to assist us in the diagnosis of this malady, is the fact that when the patient is on the horizontal posture the affected limbs may be lengthened or shortened at pleasure.

To lengthen them we have only to draw the thighs gently down, to produce shortening it is sufficient to push them towards the pelvis; or if we take the crista of the ilium and the prominence of the great trochanter as means of comparison, we shall easily see that the head of the femur in these experiments undergoes a varying displacement of from one to three inches in extent, depending upon the age, the stature, and constitution of the individuals, but chiefly on the extent of displacement of the bones; and we see by this alternate lengthening and shortening, the signs of the luxation appear, disappear, or renew themselves, in a few moments. Besides which all these displacements are effected without the least pain and with the greatest facility; and this, we may say in anticipation, leaves not the slightest doubt respecting the absence of every other kind of disease, as well as of any cavity suited for receiving and retaining the head of the bones.

This dislocation is important not only on its own account, but still more as it may stand in the way of the diagnosis of other complaints; in short, presenting all the signs of that which results from disease of the hip joint, it might easily be confounded, and it always has been confounded with the latter disease, and what is more, by an inevitable consequence it has always been submitted to the same painful treatment, although it only constitutes a defect of conformation, and at most an infirmity.

Many individuals, affected by original luxation of the femur, have been kept in their bed for years by this error of diagnosis! "I have seen others," added M. Dupuytren, "who had been obliged to support the application of leeches without number, of blisters, canteries, and especially of moxas. I remember, amongst others, one case, that of a young lady, who suffered the application of 21 moxas around the hips, without receiving any benefit from such useless and barbarous treatment." We will introduce to your notice, amongst other curious facts of this nature, one relating to a nurse, who was accused by the distracted parents of having caused, by carelessness or brutality, a luxation, which was found to exist in their young child, which had been confided to her care; but the child had in reality been born with this peculiar malformation: it is that of the individual named Danton, who was the victim of a horrible assassination. The body, mutilated, disfigured, and rolled in a sack, remained unrecognized, despite the most active investigations; when this malformation, which I made known to the authorities, gave a clue to the mystery, and assisted in identifying the corpse. The history of the life of this individual was carefully obtained, and it was found that he had never had "hip-disease," and that he was indeed born with the vice of conformation, which was the source of his recognition after death, although the most horrible mutilation had been practised by the assassin, who hoped to place his victim beyond even the ken of those who had known him the best.

We may easily distinguish the one from the other, of these two affections—so analagous in their symptoms, but so different in their origin, nature, and treatment—by attending to the following characteristics:—Absence of pain, of swelling, of abscess, of fistula, and of cicatrix: in the greater number of cases the simultaneous existence of luxation on both sides; I purposely say in the greater number, for in some patients the luxation is only met with on one side. Out of twenty-six cases of this malady which I have observed, there were only two or three of single luxation. I remember, in particular, a young child where this alteration was only met with on the right side; and that which renders the case still more interesting is the fact that a sister of this child had a similar disease, and also on the right side only. The following case leaves no doubt on this point.

4th Case:—Miss E., aged 8 years, of feeble constitution and lymphatic temperament, came to the public consultation of the Hotel Dieu, August 31, 1821.

Her parents declared that they had observed some degree of lameness as soon as the child began to walk. She had not fallen nor met with any accident to the hip during the time of her nursing;

various means had been employed for her relief, but without any effect. When this little girl stands up we immediately perceive the smallness of the left lower extremity, and the difference which exists between the form and the volume of the nates of the opposite sides; that of the left side is enlarged superiorly and rounded below; the projection of the great trochanter upwards and outwards is remarkable, as is also the oblique direction of the thigh bones. The vertebral column is strongly curved, and the head carried backwards to compensate the effects of the transposition of the centre of motion, the belly projects forwards, the knee and point of the foot are turned inwards, the ham and the heel outwards. When this young lady walks we see the weight of the trunk fall alternately, first upon one hip and then upon the other. With her, running and leaping are very difficult.

Miss E. has evidently an original luxation of the femur. The most remarkable feature of this case is that the deformity exists only on one side.

5th Case:—Miss J. de J., born January 5th, 1812,. At the time of birth no malformation was observed in the lower extremities. At the age of six months an eruption broke out upon the head, which however soon disappeared; a month after the eruption the child had the croup; there was no disturbance of the health attributed to dentition. At the age of 14 months the child was allowed to make her first attempts at walking, and it was then observed that the body was balanced first upon one hip then upon the other; and that the weight of the body, instead of being sustained by the entire sole, was supported only on the point of the foot, which was directed inwards as were also the knees, while the heels and elevated hollow of the ham were turned outwards; that the feet were moved with difficulty from the ground, and that the little sufferer could scarcely separate the thighs.

Henceforward the parents consulted various practitioners; a host of remedies were recommended and employed, but, without the least advantage; aromatic fumigations, frictions, lotions, and baths, were used for a long time, and a tonic regimen prescribed.

These means were persevered in. The child grew, and the affection of the hip also made progress, the lumbar portion of the spine projected forwards, and there was a consequent prominence of the belly.

M. Dupuytren was first consulted in 1821, the patient, having then attained the age of nine years, when she was in the following condition:—

The lower limbs tend inwards, are remarkably short and small, and oblique in their direction, so that widely separated above they are approximated below and ready almost to cross one over the other. The great trochanters project upwards and backwards; the foot is remarkably bent, the chest projects forwards, as does also the belly; the upper part of the body is altogether carried forwards. There is no deformity of the trunk, and the pelvis has its normal configuration and usual dimensions; an attentive examination was made for the purpose of ascertaining whether or not any traces of fistulous opening could be found in the neighbourhood of the pelvis. In all the other cases of original luxation of the femur, the same precaution was taken, but the closest examination did not lead to the detection of any; besides which, the unanimous statements of the parents left no doubt on the point of inquiry.

The symptoms which have been enumerated are observed when Miss J. is in the upright posture; when she lies down, the weight of the body no longer coming upon the thigh bones, the latter take their more natural position, and immediately the symptoms produced by the upward and backward mounting of the bone disappear. One thing very remarkable is that Miss J. can walk, run, and leap with as much ease as any other child.

To the outline of symptoms now given we must add the history of individuals affected with this luxation, the appearance of the symptoms of this malformation from the commencement of the patient's walking, and their progressive development, as the upper parts of the body have increased in weight.

(To be continued.)

FRACTURE OF THE RADIUS NEAR THE WRIST JOINT.

By a Country Practitioner.

DISLOCATIONS of the wrist are not common, although they may be very commonly talked about,—but fractures in the lower third of the radius are frequently met with, and when these take place very near to the wrist joint they are often mistaken for luxation of the hand. Amongst bone-setters (for this race, despite the progress of surgery, is not yet quite extinct) some have a habit of gravely declaring that something *is out* in every case, which must, of course, be put in; while others content themselves by saying that something *is broken*, the setting of which is immediately required: the least injury that a patient can possibly receive will be something serious to the *leaders*, as these gentry find it unprofitable to deal in contusions and sprains. Such remarks as we now make might not be considered worthy of a place in the pages of a scientific and valuable medical periodical; but when we consider that this trading in the sufferings of humanity is not only tolerated, but common, and that every practical surgeon, more especially those connected with large public charities, has frequent occasion to witness the dire results of the common application of undaunted and blundering ignorance in the pretended treatment of those accidents to the bony framework of the human body, which require, as Dupuytren has aptly observed, a more extensive knowledge of anatomy and physiology, of the principles of surgery, as well as of many other mechanical and less important details, than is called for in the management of most forms of surgical disease;—we cannot fail to allow that such a state of things may be worthy, at least, of some little attention, from men and institutions who might be expected to do something to prevent it.

Within a few months three cases have come under my notice, where the wrist joint had been *set*; it was stated to the patient in each instance, that it *was out*, and must be put in. These cases came to me some weeks after the accident, two of them having applied with the hope that some operation would be done for the relief of the deformed state of the parts. In all there was considerable, but in one a great degree of distortion; the hand with the lower head of the radius having been carried backwards and outwards, while reunion of the radius having taken place with such relations of the parts, the lower extremity and styloid process of the ulna formed an unsightly projection at the inner aspect of the wrist, giving the patient the idea of some projecting bone which ought not to be there, while great complaints were made of spasmodic action of the muscles of the fore-arm and weakness of the carpal articulation.

In each of these cases the rotation of the radius was tolerably free, and the hand could be pronated or supinated more completely than the misshapen state of the parts would have allowed us at first sight to suppose.

Displacement of the hand and lower portion or inferior head of the radius, with the altered direction of some of the tendons, and injury of the annular ligament, may be together considered as combining to produce that weakness of the wrist, which is so much complained of as one of the consequences of these mismanaged fractures of the radius which simulate dislocation of the carpus. Such a state of the parts is an exceedingly grievous condition, especially if the right hand suffer, (which is oftener the case than otherwise,) and this more particularly in smiths, masons, shoemakers, and others who are every hour called upon to handle the ham-

mer, or other tool, requiring a firm grasp from the hand with strength and steadiness in the wrist joint.

The surgeon in such cases must endeavour to relieve those sufferings and inconveniences arising from distortion, which we often see only when they are already incapable of removal; and this, most frequently, must be done by means which should be persevered in for a length of time, and the period for splints or attending to any particular position of the hand being passed, the main thing to be attended to is, the firm supporting of the wrist in the many and varied actions of the hand and fingers, by some mechanical contrivance, which may form a kind of substitute for the perfect state of the natural mechanism which is now unfortunately lost.

The apparatus which I have found to afford the greatest relief in these cases, is a bracelet encircling the wrist, made of the stronger kind of elastic India-rubber material, now so generally employed for braces. It should be about two inches broad, and united at its extremities by buckle, hook-and-eye, or any convenient sort of clasp; and to keep it steady, and prevent its receding from the hand, a little ribbon or piece of soft leather should be looped round the thumb and attached to its lower border, on each side of the extensor tendons of the thumb, or towards the back and towards the palm of the hand; or, if it suited better the manner in which the hand may be employed, this appendage might be turned round the root of the middle finger. This mode of bandaging the wrist affords efficient support to the weakened parts, and enables the individual to use the hand in a manner which without the strap would be exceedingly painful, if not impossible.

Although these directions may be supposed to be made up of matters of trifling detail, we not unfrequently see cases where various kinds of *liniments*, &c., had long been used without the slightest benefit to the patient, who has found himself much relieved as soon as the mechanical support we notice was employed.

In addition to this, the frequent immersion of the hand, wrist, and fore-arm, in cold water, or the pumping upon them from a height, will be found to be worth the trouble of application.

In one case, where spasmodic tremblings of the muscles of the fore-arm were met with, the patient was in some measure relieved by friction with a liniment containing a small portion of the extract of belladonna.

We occasionally find that a few turns of a calico roller carried up the fore-arm are also of use in assisting the narrower apparatus applied merely to the wrist.

We now leave these considerations respecting the means of affording relief to conditions of the wrist, which are met with as consequences of badly treated fracture of the radius, and proceed to trace the outline of a mode of managing this accident, by which such an after state of the parts would be prevented.

We may easily suppose that dislocations of the wrist are exceedingly rare, for Dupuytren has remarked in his clinical lectures, that he had never met with a case of this kind of accident; while fractures of the radius, and those especially which occur near to the wrist joint, are very common, as will appear from the following statements:—

Out of 109 cases of fracture treated in the Hotel Dieu in the year 1829, 23 were fractures of the fore-arm. These were,

Of both bones	5
Of the ulna	2
Of the radius	16
Total	23

In 1830—out of 97 fractures, 22 affected the fore-arm. These were,

Of both bones	4
Of the ulna	2
Of the radius	16
	22

So that out of 45 cases of fracture of the fore-arm, 32 were fractures of the radius; and in other years the proportion at the Hotel Dieu has been greater.

Sufficient has been said, therefore, to shew the extreme rarity of dislocation of the wrist, as well as the extreme frequency of fracture of the radius; and it may be said, that when a man presents himself to our notice with a distorted wrist, after falling upon the palm of the hand, whether thrown from a height, as out of a gig, or merely by being tripped up in walking,—the probability is that he has met with the injury in question, or fracture of the radius, and this most likely will be found very near to the wrist joint.

Nor is it difficult to understand why this sort of accident should happen rather than any other; for every one is acquainted with the instinct which impels us to throw forward the hands when falling, so as to save the head and face, and if we recollect the manner in which the radius is placed between the humerus and the hand, receiving the shock from the latter and the weight of the body from the former, we shall not be surprised that it is thus broken; for there is no part of the skeleton which is proof against such injuries, resulting from the combined effects of the weight of the body coming down upon the part, and the velocity with which it approaches the ground; besides which, this lower part of the radius is spongy, and easily yields to the shock it receives from the hand.

It is not our object here to mention many details respecting the symptoms by which this accident may be known, for if we remember the way in which it commonly occurs, we shall not have much further trouble about the diagnosis. The hand is generally bent backwards, the lower extremity of the undisturbed ulna projects considerably, the fingers are bent more or less towards the palm; but if any considerable time elapses before the surgeon examines the parts, the ensuing tumefaction will often render a precise diagnosis very difficult.

Moderate extension restores very soon the natural aspect of the wrist, which again becomes distorted when the extending force is removed. Crepitation may often be discovered; this, however, is not always the case, especially if the fracture be very near to the joint, where the breadth of the broken surfaces of the radius tends to prevent their separation, and while they are in good opposition we may sometimes try in vain to hear or even feel any grating.

It need scarcely be said that the great object to be attended to in the treatment of this injury is the even reunion of the broken radius; and it may be remarked, that to effect this we must endeavour to prevent the portions of the injured bone from intruding on the breadth of the interosseous space, while the hand must not be allowed to deviate in such a manner as would admit of its displacing the lower portion of the broken bone.

To effect this, it is not sufficient to apply a couple of splints, in front and behind the fore-arm, padded with tow, and fixed by a common roller—as is not unfrequently done; such splints may be used, but only with the interposition of a long compress, pushed close upon

the interosseous space in front of the fore-arm, another of the same kind being placed behind: such an apparatus might be considered as tolerably good, especially if the anterior splint be a little prolonged upon the palm, so as to steady the hand applied to it.

An apparatus more or less of this kind was formerly employed by M. Dupuytren, to which, however, he afterwards added the ulnar splint, and by means of this, introduced an important modification to the received treatment of this fracture of the radius, to which we cannot pay too much attention.

The ulnar or cubital splint of M. Dupuytren was formed of a strong piece of sheet iron about an inch in breadth, of the length of the fore-arm, bent outwards, or away from the hand, into a half circle below, in the concavity of which several little knobs or buttons were placed at equal distances.

The ulnar border of the hand was brought towards the convexity of the semi-circle, and secured upon it by tapes crossing the palm and the back of the hand and fastened to the aforementioned buttons; the upper or straight portion of the splint being applied to the length of the ulna, and steadied there by appropriate bandaging. This splint, however, was not used alone, but in conjunction with the compresses and splints before and behind.

By bending back, or rather extending the hand, the soft parts at the lower part of the fore-arm, flexor tendons, &c., are pushed towards the interosseous ligament and tend to fill the interosseous space, and, consequently, will in some degree prevent the portions of fractured radius from intruding upon it; so that, by fixing the hand in this position we may do away with the necessity for a graduated compress in front. It is easy, however, to have the additional security of a graduated compress beneath an iron splint for thus fixing the hand, the latter being at once extended, and adducted or drawn in the direction of the ulna. This, then, I would recommend as the most simple, easy, and efficient method of treating fractures of the lower extremity of the radius,—viz., the employment of one iron splint, and this one only to be so formed that it should apply itself to and fit the fore-arm and palm of the hand, and maintained them in the position above indicated; the hand adducted for the purpose of preserving the broken portions of bone in that position which is most favourable to their reunion in the natural direction, the hand at the same time being extended, or bent backwards, so as to make a compress of the flexor tendons in front; to which we may easily add the graduated compress to be placed between the splint and the front of the limb at the lower part.

This splint may be lined with cloth or covered with lint, and if the hand be well secured to the bent part of it below, and a few turns of a roller at its upper extremity fix it steadily there, it will not be necessary to hide the wrist or region of the injury from view by any additional bandaging of the lower part of the fore-arm. The splint may be either flat or have its edges very gently bent towards the borders of the fore-arm.

THE DAGUERRETYPE.—A. M. Isenrig, a painter, living at Munich, has announced that he has discovered a process, whereby, through the Daguerreotype, he can depict all the objects of nature, with the brilliancy of their colours, so as to bear comparison with the finished productions of the first artists.

TO TIE THE PRIMITIVE OR COMMON CAROTID ARTERY.

(The first of a series.)

RELATIVE ANATOMY.—The sterno cleido-mastoid muscle divides the neck diagonally into two regions. The anterior, in which we have the carotids, which I shall call, for the sake of distinction from the posterior, the *laryngo-tracheal* region, is bounded anteriorly by the prominences of the larynx and the trachea; posteriorly, by the anterior edge of the sterno cleido-mastoid; and superiorly, by the base of the lower jaw. This region we may also subdivide, for description-sake, into three other triangles, viz., the *uppermost*, described between the posterior belly of the digastricus and the base of the jaw—the *middle* triangular space, between the posterior belly of the digastricus, anterior belly of the omo-hyoideus, and a portion of the sterno-cleido-mastoid. In this, the most interesting space of the three, because generally the seat of the operation, we observe, nearest the larynx, the commencement of the external carotid artery; next, more outwardly, or laterally, the internal carotid; and still more outwardly, or nearest the sterno-mastoid muscle, a portion of the internal jugular vein. We also have the upper part of the common carotid artery, together with the origins of the lingual, superior thyroid, external maxillary, and occipital arteries, the motor-linguae crossing the commencements of the two latter and the two secondary carotids, and throwing downwards the descendens noni. The inferior triangular space, or lowest part of the anterior region of the neck, may be supposed to be described between the anterior belly of the omo-hyoid muscle and the trachea; this is implicated with the operation, should we tie the lower part of the common carotid in the lower third of the neck.

The common carotid artery is covered in the lower part of the neck (the region last referred to,) by the acromial edges of the sterno-hyoideus and thyroideus muscles, also by the omo-hyoideus, and, still more superficially and extensively by the sterno-cleido-mastoid. About the upper inch of the artery is left, by recession of the sterno-cleido-mastoid, in an angular cavity, (the middle subdivision of the great anterior cervical region) bounded internally and anteriorly by the angle of the thyroid cartilage and the body of the os-hyoideus, and externally and posteriorly (towards the acromion) by the anterior edge of the sterno cleido-mastoid—and here the artery is only covered by the common integuments, platysma, and superficial cervical fascia.

The internal jugular vein is situated by the external or acromial side of the common carotid artery; both are contained in the same sheath, but are separated from each other by a septum of the latter; the par-vagus, or pneumo-gastric nerve, is situated between and somewhat behind the two vessels, and between two laminae of the septum, so that it is in absolute contact with neither the vein nor artery. The integrity of this septum should be preserved, if possible, during the operation, whereby neither the internal jugular vein, nor the par-vagus, will be brought into view. It must be borne in mind, however, by the operator, that sometimes the vein lies upon the front of the artery—this shows with what extreme caution the sheath should be opened, and the artery tied. The descendens noni generally descends on the fore part of the sheath. Behind the sheath, and upon the rectus capitis anticus major, and the longus colli, we have the sympathetic.

A non-correspondence exists between the lower parts of the right and left primitive carotids. The right is the more superficial of the two, and close

against the side of the trachea, sometimes even upon it,—the left lies deeper, and is more particularly associated with the side of the œsophagus, the internal jugular vein lies *anteriorly* and laterally to it.

OPERATION.—*First Stage.* Having inclined the patient's head obliquely backwards, and towards the opposite side, so as to have the integuments moderately tense—make the *first incision* parallel to the anterior edge of the sterno-cleido-mastoid muscle, about 2½ in. in length, cutting through the common integuments, platysma-myoides, and superficial fascia of the neck. The anterior edge of the sterno-cleido-mastoid will, thereby, be exposed, and the external jugular vein will probably be met with, which must be avoided, if possible, and turned aside,—if unavoidably cut, apply a fine ligature upon it, above and below the wound, which can be removed after the completion of the operation.

Second Stage. Next, reflect the anterior edge of the sterno-cleido-mastoid muscle (to a small extent only, if we tie the artery above the omo-hyoid muscle) so as to expose the sheath of the carotid, and the ramus descendens nervi noni will probably be seen descending upon it.

Third Stage. Open the sheath in a hernial sac manner, i.e., by pinching up the surface of the tracheal side of the sheath between the extremities of the forceps, and scratching a small hole carefully through it with the point of the scalpel, close to the extremities of the forceps, the blade of the knife being held nearly horizontally, then introduce a director upwards through the sheath, slitting the latter up with a bistoury upon the director for a suitable extent, and, if necessary, downwards, in a similar manner, avoiding, if possible, the ramus descendens noni; next, flexing the patient's neck a little, so as to relax the artery and its concomitants; isolate the artery, but only to so small an extent as may be necessary to ensure the free passage of the ligature. Then pass the aneurismal needle and ligature behind the artery from without inwards, tie the ligature, cut one string off close to the knot, and bring the other out through the wound, the edges of which must be well retained together by sticking plaster.

The term, "taking up the artery," is a barbarous expression, as though it were to be pulled or dragged up as high as possible out of the wound; it seems to license rough usage; whereas, both in passing and tying the ligature, the artery should be disturbed from its natural position, and all other parts, as little as possible.

First Stage. Incision through the integuments.—*Second Stage.* Reflection of the sterno-cleido-mastoid muscle, and exposure of sheath.—*Third Stage.* Opening of sheath, isolation of artery, and tying it.

TO TIE THE LOWER PART OF THE COMMON CAROTID ARTERY.

After dividing the integuments, we must (bending the neck) reflect the sterno-cleido-mastoid muscle much more than in the preceding operation, in order to have due command over the artery; by this reflection we come to the deep cervical fascia, which we divide, and then to the muscles immediately covering the sheath, viz., the omo-hyoid, sterno-hyoid, et thyroid, which must be divided with a bistoury director to a necessary extent, and drawn towards the trachea,—the sheath must next be opened, the artery isolated, and the ligature passed, as directed in the preceding operation. It would be, I conceive, fruitless of all good to apply a ligature upon the commencement of the artery (rather tie the innominate,) inasmuch as there would be no room for an internal plug; a strong current would be washing against the cardiac side of the ligature, and fatal secondary hemorrhage would be inevitable.

Sabatier advises securing the lower part of the common carotid, by cutting between the sternal and clavicular origins of the sterno-cleido-mastoid; but this mode would be attended with much embarrassment, and with not a single advantage.

G. D. DERMOTT.

Charlotte-Street School of Medicine.

CURABILITY OF CONSUMPTION.

To the Editor of the 'MEDICAL TIMES.'

SIR,—

ONE of the alleged benefits of a southern climate is the influence of a warm dry air on the animal economy, promoting an equable distribution of the circulating fluids over the system, and particularly augmenting the circulation of the capillaries on the surface, and diminishing in the same proportion the congestion of the internal vessels, &c. We have means at home to promote the equable distribution of the circulating fluids, but by diminishing the congestion in the mucous membrane of the lungs, we cut off from the patient the advantage of the remedial agency of our own climate. The liquefaction of tubercles may take place at any time; it is highly necessary, therefore, that the patient should always be within the reach of the best medical advice, which is hardly to be hoped for when at sea, or in many of our foreign places of resort. Persons sent abroad promiscuously for various diseases, are liable to fall into the hands of unskilful practitioners, who may, under the supposition of disorder of the liver, or from some other erroneous view of the case, administer mercury, and rapidly bring on a general and sudden softening of the tuberculous deposit. Aggravation of the symptoms always attends these liquefactions, and demands the utmost vigilance and skill, which may be more surely expected at the hands of one who has had familiar acquaintance with the patient's constitution, and the history of the disease, than of a stranger.

The bland effect produced on the nervous system by change of scene, &c., with the superior opportunities of taking exercise in the open air, may easily be obtained in England to every desirable extent, without incurring the expense and inconvenience of a long sea voyage, or journey by land. The great advantage derived from migration, consists in the stimulus given to the lungs by exercise, the change of air, or its bracing qualities, as at sea—deepening the inspirations and expanding the chest. As to exercise in the open air, that may be obtained at home, without incurring the risk of breathing a cold temperature,—for instance, through Jeffrey's respirator,—if desired, though if the supervention of catarrh be a good, rather than an evil, this instrument will be rarely used by consumptive patients.

The lungs may be simply and safely kept in daily exercise and expansion to the full amount practicable by atmospheric inhalation, through the regulating apparatus, I have before alluded to, which has been so long tried and proved by Dr. Ramadge, both in his public and private practice.

I have never known a well-marked and decisive instance of the cure of phthisis by removal to a southern climate. Those who return alive I have no doubt will be found on examination to have carried out their protection in their own persons, in the form of enlarged tonsils, cardiac affections, &c., &c. And many who have breathed their last abroad in this idle pursuit of health, would probably have lived many years, had they remained at home to run the risk of contracting a catarrh, or retaining one already contracted, and by losing which in their travels, they parted with their best protection.

If your correspondent, *Observer*, will place himself in a situation to communicate with me, I shall be happy to shew him a very large number of cases, which he can interrogate for himself, illustrative of the curative effects of catarrh on phthisis. The use of the inhaling tube supersedes the necessity of recourse to the expedient of superinducing catarrh; but, in the absence of this apparatus, I have no hesitation in saying, on the principle of choosing the minor of two evils, that exposure to the exciting causes of catarrh, under prudent restrictions, is an alternative that may be judiciously adopted in phthisis. The poor chiefly owe their protection against the effects of this disorder to their frequent exposure to the open air and the vicissitudes of the weather.

A lady of illustrious rank, who has for a long period laboured under occasional phthisical symptoms, possibly owes the prolongation of her life, not to remedial treatment, but to the disease manifesting itself in the winter season, and the consequent

association of catarrh,—or to enlarged tonsils, a cardiac affection, or some other of the impediments named above, to the ingression of fresh tubercular matter. The attack of last winter was perhaps liquefaction of old tubercles, attended with catarrh. The chief danger was from the catarrh, which might have been followed by inflammation, either with or without œdema of the lungs. The air of Malta was ineffectually tried, and now she is said to enjoy good health,—tho' her palaces remain untenanted, and relief is judiciously sought from constant change of locality. In this instance the inhalation of atmospheric air by the mechanical apparatus, would be likely to prove advantageous. The next best expedient after inhalation is change of locality. I have no doubt Dr. Hohnbaum, the family physician of the reigning Duke of Saxe-Meiningen would concur in these views.

The lady of a gentleman who holds a highly confidential appointment in her Majesty's establishment, had been ten years suffering from convulsive asthma, and having applied for advice to my old preceptor, Dr. Ramadge, was recommended the use of inhalation, with other appropriate treatment, and got quite well in a few months. With the exception of a slight relapse, easily removed by similar means, she has continued so, now a period of more than four years.

An officer in the Guards, son of one of the Members for Bedfordshire, was in 1835, pronounced by one of Her Majesty's physicians in ordinary to have a cavity in the right lung, from which blood expectorated was said to flow. His father naturally anxious, had, some thoughts of the propriety of selling his son's commission and sending him abroad; but, on consulting Dr. Ramadge, was dissuaded from his purpose. In this case the chest was decidedly flattened, particularly over the site of the cavity, beneath the clavicle on the right side. Restorative and sedative treatment, with the use of the inhaler, were adopted; the last-named being persevered in for some months. His symptoms gradually disappeared, and the chest re-expanded, and he now enjoys excellent health, and is with his regiment in Canada. Had he gone abroad, as at first advised, the case would probably have proved fatal.

The son of a respectable merchant in the Borough, in 1839, whose only brother had died of consumption the year previous, was recommended, by the author of the *Sanative Influence of Climate*, to go to Madeira; but on being counter-advised by Dr. Ramadge, who ascertained he was without any of the natural defences against tubercular progression, and, besides hectic, emaciated, spitting blood, &c., remained at home. By general constitutional treatment, and the use of the inhaler, by degrees he lost all his unfavourable symptoms, and has since continued in a very satisfactory state, to the agreeable surprise of Dr. Hull, of Peckham, who, as the family practitioner, had the case under his daily superintendence.

I have now before me a copy of a letter from a Scotch gentleman, Mr. C—p—ll, to the father of the Master of the Mint, in which, after detailing the early history of his case, he states that he consulted Drs. Alison and Spittal, of Edinburgh, who pronounced his lungs tuberculated, and advised him to go to Madeira. On the eve of departure he was induced, by Dr. Hull, of Peckham, to call upon Dr. Ramadge, who found that his case was decidedly consumptive, a well-marked cavity existing in the summit of the right lung. Advised not to go to Madeira, he accordingly remained at Peckham, and adopted Dr. Ramadge's mode of treatment, consisting of restorative diet, — medicines, &c., adapted to urgent symptoms, — out-of-door exercise, though in winter—and the mechanical process of inhalation. By persevering in this course for four and a half months, he increased in weight about 16lbs., his chest expanded some inches, his breathing became perfectly natural, and the expectoration ceased. He considered himself chiefly indebted to the inhaling tube for his improvement, but at the same time attached due importance to the auxiliary treatment.

Dr. Ramadge has repeatedly shewn the medical gentlemen who from time to time attend the In-

firmary for the Lungs, that the regulated atmosphere of the wards—(65°)—generally disagrees with phthisical patients, and is only useful in cases of chronic catarrh. The two last matrons of the Infirmary, one of whom held the situation seven years, and the other, three, uniformly observed that in consumptive cases, the regulated temperature and confinement of the wards were, after a time, injurious. Their frequent opportunities of observation, entitle their opinion to some consideration. Dr. Buxton, who founded the charity, also entertained the same views; and the experience of twenty-two years at the Infirmary confirms Dr. Ramadge in the conviction of their truth.

Mr. Rose, a gentleman connected with the literary world in Glasgow, in a letter very recently addressed to Dr. Ramadge, thus expresses himself:—"Indeed it ought to require no great extent of verbiage or laborious announcement, to recommend a system which, in place of consigning the consumptive, one and all, to the tomb, holds out well-grounded and rational hopes of restoration to those who are in the early stages of this insidious disease. Unfortunately the medical profession, as a body, exercise a very undue influence, and mankind are too easily led to suffer death by recognized rule, rather than seek measures of relief in a departure from old formulæ and ex cathedra opinions."

PHILANTHROPOS.

TO CORRESPONDENTS.

Notice.—We earnestly solicit from our friends and the public, that all influence may be used to prevent entries at any of the London Schools, until we have given our annual review of the professional lecturers and courses.

Mr. A. Molton.—We have not been able to ascertain the names enquired after—if more successful this week, we shall send a private note.

The letters of Mr. A. Moore, J. P., Philo-Wakley, Immeritus, A Country Druggist, Titus, Mr. Peter Anodyne, are under consideration.

Several letters have recently come to us, the postage unpaid. If they were of consequence, the writers are requested to send them a second time, but prepaid. The communications not noticed, are respectfully declined.

Amator.—We know little of the publisher, but as to the work we quite agree with our Correspondent that, "if each of the writers were contending for some prize as the reward of the highest dulness, a more wretchedly mediocre or intolerably tedious periodical could not be got together." It has *White Cross Prison* stamped on its face. It would be a libel on public taste to suppose such a work purchased.

We are obliged to postpone to next week one or two papers announced for this.

THE MEDICAL TIMES.

SATURDAY, SEPTEMBER 10, 1842.

"Ubi non est pudor,
Nec cura juris, sanctitas, pictas, fides
Instabile regnum est." SENECA.

SEVERE as are many of the charges brought against our national character by foreigners, some referring to the barbarity of our sports, others to the meanness of our public buildings, others to the pride of our manners, or the inconsistencies of our morals, we are yet unacquainted with any thing that ought to tell on our reputation with a more scathing power of satire and ridicule than that tragically whimsical habit of ours, of making every spare corner of the most crowded of cities, a repository, to its very surface, of the decomposed dead, and systematically accumulating their reeking carcasses in the greatest possible number, and

in the nearest possible proximity to the living—thickening, with their animal exudations, the waters which, necessarily percolating through them, supply our pumps and fountains, and poisoning, with their more deadly exhalations, each of our sanctuaries of religion, and every densely populated residence of our humble countrymen. A barbarous and murderous practice, utterly indefensible in itself—there is no one circumstance in any of our local arrangements to be alleged, that can tend, even remotely, to its justification. Shall we name the interests of the clergy? But our clergymen are of the *Reformed Protestant Church*, and even in such Popish kingdoms as Portugal, France, and Spain, the priesthood—whose peculiarly grasping avarice and covetousness is a proverb in all our clergymen's mouths—even these have not dared to interpose their far greater pecuniary interests in the way of this momentous improvement, but have been the first to suggest, and the foremost to aid the abolition of intra-mural sepulture. We say, then it, is a libel on our respected Church to conceive its ministers less regardless of public decency and health than those of a less favoured faith. Shall we allege then as the reason, respect for the dead? But is it respect for the dead to make them a pest for the living? when their usefulness in society has ceased with their lives to make their deaths the signal for injury to those they have left behind them? And are they respected when buried in an already twice or thrice overgorged yard?—when the third week may see them hacked and cut to pieces by sextons' implements, invented especially for that peculiar purpose, and used that their yet unfestered members may make room for fresh comers, by taking more quickly the appearance of the putrefactive animal soil in which they are imbedded?

But if the general practice, thus unjustifiable, cannot be looked on by foreigners without amazement, if not contempt—with what feelings are they likely to contemplate the astounding step taken by the learned, the scientific, the medical professors of a British College of Education, when with a thousand noble sites around them, they deliberately placed in the midst of a condensed wilderness of fetid human piggeries, by the side of multitudes of offal shops and slaughter-houses, and directly over the most horrible of all London's horrible grave yards, that hospital for the sick and delicate, which they were enabled to establish by the generous contributions of their humane and benevolent countrymen? Supposing that the moral improbability of so extraordinary an act in an enlightened country (and by scientifically enlightened men too!) be overpowered by *physical evidence* demonstrating but too plainly the astounding fact; supposing that mocking foreigners are at length made certain that men of medical reputation who know something of the mischiefs of bad air—the dangers threatened by animal as well as vegetable malaria—the effects of scenery on the convalescent or delicate—the history of plagues

and pestilences—the causes of the rise and spread of fevers,—let us suppose them certified, we say, that such men—*gentlemen* and professors—could have selected so *odd* a locality as the lengthened resting place of the sick, whom—invited by their reputations or their kindness from all parts of London,—they were resolved to do their best in healing and solacing, how would their wonder be turned into stupor, their contempt into disgust, when they heard as we have heard, these same professors standing up before the senate of their country, and with evident marks of self complacency and exultation, saying (oh! was the height of impudence ever reached before!) “We confidently ask for the public's heartiest support of our institution, not on account of our scientific skill, our tenderness of charity, our perseverance in benevolent industry,—but on that strongest and most irresistible of titles, *the Hospital's peculiarly excellent local position!*”*

It is painful to our feelings, as it is disgusting to our imagination, to recur and dwell on this extraordinary procedure; but we know of no mode of being silent and at the same time performing our duty. As the medical man's journalist, we are the bound friends of humanity: and *here* we have its sacred name defiled, its purposes frustrated, by its enforced connection with all that is most harrowing to the man of feeling, standing as a spectator, and all that is most injurious to *him*, whom poverty, making an agent, this abuse turns into a victim. We are the defenders, if not precursors, of enlightenment; and *here*, if human health and life be desiderata, we have practices which would shock the grossest ignorance of the rudest of our middle ages. We are the anxious advocates of education; and *here* we have a scientific body lending its express practical sanction to the most demoralizing, the most brutalizing of low-life's practical lessons. We are interested in the march of science, and have a stake in the credit of its professors; and *here* we have the first disgraced, and the second made the instruments of general mischief and the objects of popular derision. And lastly, we boast some love of country; and *here* we have to deplore a proceeding—and on the part of our most prominent medical men—which justly makes our fatherland a subject for ridicule and reprobation to the least enlightened of European nations. Painful, therefore, as is the task we have undertaken, a sense of duty to ourselves, to science, and to our country, imperiously forbids its abandonment. Our labours will only cease with their cause; and, if our interpretation of things be not strangely amiss, we may indulge a confident hope that our day of deliverance is not far distant. The *Times*, the *Morning Chronicle*, and other daily papers have already taken up our cry: the weekly and provincial papers

* This is the bare—we are tempted to say the bare-faced—fact, as may be seen in Dr. Todd's Evidence before the Committee on the health of towns.

are one by one joining in the run: the public attention is already sufficiently aroused to make it worth the while of those knowing speculators, the ballad-criers, to re-publish our statements, and shout them like a tale of murder through the streets; and the House of Commons will certainly ill discharge its duties as a legislative assembly, and ill represent the wishes of the people of this country, if we are doomed to be disappointed in our confident expectation of seeing next session the universal destruction of one of England's worst blots and greatest pests—ITS TOWN GRAVE YARDS.

Here we should have concluded if we had not received a document containing the testimony of an eye witness on *some* of the atrocities perpetrated in the hospital grave yard, under the very eyes of the patients,—a document which as much in justice to the memory of the lamented Mr. Don, the distinguished Professor of the College, as to the cause we are endeavouring to serve, we feel bound to publish. The letter is of the highest practical value, and proves, but too clearly with what an awful hazard to human life, the King's College managers persist in inveigling unfortunate patients to that Haeeldema of theirs the Portugal Street Hospital.

One word in kindness with the Governors of King's College before quitting the subject. Are they anxious to stay this uneasy pothor, or will they procrastinate till they have lost patients? students? subscribers? till in fact, Parliament put down their hospital as a public nuisance? If not, let them set to work betimes. If the Act which removes the Law Courts to Lincoln's Inn, free us not from their enormous nuisance—and our interest will be inoperative if it does not—there is to be a bill of Mr. Mackinnon's that will. Let them ponder on this while reading the convicting evidence we now advance against them.

GRAVE YARD NUISANCE.

(To the Editor of the “Medical Times”)

SIR,—Having signed a petition at your office for the immediate shutting up of the burial places in this neighbourhood, and knowing that an attempt has been made to deny the truth of my evidence, and that of some other persons who gave evidence before a Committee of the House of Commons on this matter:—I send you the following particulars of the real state of a burying ground which I know the best of any, as the back windows of my house look into the ground in Portugal Street, Lincoln's Inn Fields.

I have been often greatly excited at the goings on in this place, enough to make a persons' hair stand on end, skulls thrown up with hair on them, human bones in great heaps, and hundreds and hundreds weight of undecayed coffin wood, taken away to burn in the poor people's fire places.—On Friday, November, 29, 1839, in consequence of a young woman (whose child had been buried there a short time before), making a great outcry, I went into the burying-ground. Alexander Ewings and William Sisley were planting trees in this grave yard, under the window of Mr. Wood's house, which looks into this place. The young woman, in great grief, said she believed that her child had been taken up. A gentleman, the LATE PROFESSOR DONN, (of King's College,) who was superintending the men in planting the trees in the burial ground, SAID “I will give you my good woman, my word and honour we have not taken up any coffins, for we find

that in some places we come to, THE COFFINS ARE NOT TEN INCHES FROM THE SURFACE, and we cannot plant where we wish on that account." I then had a little chat with Professor Donn, and shewed him Mr. Walker's Gatherings from Grave Yards, which I had under my arm. The young woman not being satisfied, said, pointing to the spot where her child was buried, "that is the spot where my child lays." I was anxious to satisfy myself about the depth; two of the servants at Wood's house gave me a piece of pan-tiling lath—with this I measured the DEPTH OF THIS CHILD'S COFFIN from the surface, and found it ONLY FOUR INCHES. One of the young men measured the depth also, and taking his knife out of his pocket, cut a notch in the stick at four inches; this I exposed in my window for months. Mr. Donn, a very worthy and kind man, was present all this time, he was utterly surprised, and said, "what a piece of absurdity to bring a hospital into such a place as this, and said he hoped soon that a higher power would interfere, and put a stop to such abominable doings." The child named Robert Maitland, was five months and two weeks old, and was buried, as the mother thought, about four feet deep, on the 3d. of November, 1839, so that in less than a month, he must have been brought up to within four inches from the surface, most likely to share the fate of hundreds and thousands of others in this abominable grave yard. In proof of what I state I obtained on the spot from the late Professor Donn his signature on a fly leaf of the book I carried with me. The fact of the depth of this child's coffin from the surface was also witnessed to on the same leaf with Professor Donn's signature, by Alexander Ewings, and William Sisley, the two men above mentioned. The next day after what I consider a very proper discharge of my duty, I received a written notice from the Churchwarden, Mr. Mason, cautioning me not to enter the ground again, and Fitch, the sexton, gave orders to Michael, the grave digger, to "run me, the b——— through with the searcher, or knock me down with any thing he could get hold of."

There is one other circumstance I wish to mention: a lodger of mine, Mrs. Brett, was seized with typhus fever soon after I came into my present residence, she was taken to the fever hospital, her husband went to visit her, returned in a state of stupor, and died in a back room looking over the burying ground. A grave was made for the said Mr. Brett, about ten feet from my window. I smelt a most horrid stench from this grave, and another close to it, which the grave digger told me when I complained of it, "was to LET." Watkins at last brought a tarpauling and covered over the grave which was "to let." Mr. Brett was buried in one of these holes on Sunday, February 17th, 1839. This grave was opened again on Sunday, March 3d, 1839, a fortnight afterwards, and a corpse from the poor house was put into this said grave; this induced me, being much excited, to again go into the grave yard. I measured with a rule the depth from the surface, before the corpse was covered up; the coffin was scarcely two feet from the surface. I should have mentioned that Mr. Brett's dead body was unburied for ten days, there was a shocking smell in my house in consequence. Mrs. Brett told me that she paid between £5 and £6 for the funeral of her husband, and she thought it a shocking thing that his grave should be opened directly afterwards, and that too in her very sight. She went in great indignation to ask the Rector and Churchwardens to redress her grievances. She left Clement's Lane to reside near Clerkenwell Church, and followed her sister to the grave, who, I was informed, caught the typhus fever in consequence of attending on Mrs. Brett at my house, and at the fever hospital.

During the time the above graves were kept open under the windows that I was obliged to open, to get even a mouthful of such air as a man breathes there from such a rotten grave yard, Watkins, the grave digger used to search with his iron borer all over the space on that side, and the gas used to come up in such quantities, that the smell was unbearable, and this he did when I was very ill in my bed-room, which is close to the grave yard. Now, Sir, is this right? In some of the houses on this side, as in the hospital, the living live and

sleep cheek by jowl within a few feet of the dead. I have often said to the heartless grave diggers, whilst at their inhuman work, "well may typhus fever rage in this lane as it has done—well may there be so many sudden deaths, and so many people carried at the parish expense to the fever hospital, and well may Kirby, the relieving officer, when he comes to scrutinize the cases, before sending them off, say 'I don't know how it is, but nine cases out of ten ON THIS SIDE OF THE LANE—the burial ground side—is typhus fever, or some other malignant disease.'"

I should not, Sir, have written to you, if I did not consider it my duty to my Maker, and to the community of which I am a very humble—but, I believe, an honest member—to cry with all my might against such horrible doings ever since I have been in Clement's Lane. I have reason to know that a very great number have been carried out of that lane; people knowing me to be very scrutinizing, have brought me accounts of the death of one or another. I have put them down on paper, which I send with this, Sir, for your inspection; many of these deaths I can answer to myself. I beg to say that I have no interest in this matter only for general good. I have been examined before a Committee of the House of Commons on this subject, and have received no remuneration whatever. I have devoted a great deal of my time to root out the evil, and will a great deal more, till these abominable practices are done away with. The following is an account of deaths in Clement's Lane and the immediate neighbourhood, from October, 1838, to November, 1839. The deaths were then very numerous; but a great number have died since. They generally die very rapid, and some have dreadful bad fevers.

DEATHS.

Mr. Hadfield, typhus fever, Clement's Lane.
Mrs. Mustoe, typhus fever, 34, Clement's Lane.
Mr. Maze, typhus fever, Clement's Lane.
Mr. Rosamond, St. Clement's Lane.
Mr. Brett, } typhus fever, 33, Clement's
Mr. Brett's sister, } Lane.
Mrs. Martin, fever, Clement's Lane.
Mr. Poole, } typhus fever, Clement
Mrs. Poole, }
Mrs. Paine, typhus fever, Clement's Lane.
Mr. Ward, typhus fever, 40, Clement's Lane.
Mr. Scott, typhus fever, Clement's Lane.
Mr. Norfolk, a middle aged man found dead in his chair, at 34, Clement's Lane.
Mr. R. Legg, typhus fever, Clement's Lane.
Mr. McGrath, Clement's Lane.
Mrs. Hayes, typhus fever, Clement's Lane.
Mr. Bradley, Clement's Lane.
Mr. Fitzgerald, typhus fever, Clement's Lane.
Mr. Edmonds, typhus fever, Clement's Lane.
Mrs. Crow, typhus fever, Clement's Lane.
Mary Ann Sneed, typhus fever, Clement's Lane.
Mr. White, Clement's Lane.
Mr. Costello, } typhus fever, 40, Clement's
Mrs. Costello, } Lane.
Mrs. Bowman found dead in her bed at 28, Clement's Lane.

AN ENTIRE FAMILY, NAMED LAMB, WAS ATTACKED WITH FEVER, THE FATHER, MOTHER, AND TWO CHILDREN DIED, IN CLEMENT'S LANE.

CHILDREN who DIED in Clement's Lane same time, are,—

Mr. Turner's two children, Joseph Windred, John Gills, Edward Andrew Irwin, malignant typhus, Susan Wright, Mrs. Cartwright's two children.

Attacked same time and recovered, chiefly with fever, in Clement's Lane.

Mrs. Maze, Mrs. Rosamond, Mrs. Brett, Mrs. West, Mrs. Edmonds, Miss Edmonds, Mr. Weatherbraham.

A whole family went from No. 14, Clement's Lane, to Fever Hospital.

Mrs. Hurley, to Fever Hospital.

Mrs. Poole, Clement's Lane.

I am, &c.,

JOHN IRWIN.

33, Clement's Lane, Clare Market,
Sept. 6th, 1842

REVIEWS.

On Diseases of the Bladder and Prostate Gland, with plates. By WILLIAM COULSON. Third Edition, Revised and Corrected. London. Longman and Co.

WE have perused this work with pleasure, and as the subject is of the deepest interest, and engages much of the attention of the general practitioner, we shall give a brief analysis of the book, and in as impartial a manner as possible.

The first, or preparatory chapter, is devoted to the consideration of the chemical, physical, and physiological properties of urine, subjects which we are glad to see are beginning to obtain that attention from the medical practitioner which their great importance demands.

In the second chapter, our author enters upon the subject of *irritability of the bladder* without organic cause. Irritability of this kind is attended with no pain, and the urine is generally healthy, the cause of the irritation being in another, sometimes a distant organ. Thus, irritability of the bladder may arise from piles, from pregnancy, from seybala in the intestines, from contracted prepuce, from derangements of the kidneys, &c. After the removal of the exciting cause, should the irritability continue, our author recommends the exhibition of the infusion of the diosma, according to the following formula:—

R. Infus. Diosmæ, ℥viij.
Potass Bicarbon, ℥i.
Tinct. Hyoseyam, ℥iiss.
Extract fluid Sarsap. ℥iv.

Two table spoonsful to be taken three times a day. If the urine be not very acid, the Alkali, must be omitted,

Paralysis of the bladder, an opposite state to the former, is next attended to, and the best plans of treatment are pointed out in a succinct and clear manner. The first indication of cure in this disease is the removal, with the requisite caution, of the urine from the over-distended bladder, and the second indication is to restore tone to the paralysed viscus. The most powerful means we possess to effect this last indication, is *strychnine*.

Dr. Ballie has employed strychnine internally in paralysis of the bladder, at the Hospital de la Pitié, and has obtained from its use very decided benefit. Three patients have been cured in less than a month by this remedy, given in doses from one-tenth of a grain to two grains, every four-and-twenty hours. M. Petrequin has likewise related several cases of the use and benefit of the same remedy in paralysis of the bladder, ensuing as a consequence of injuries done to the spine.*

From these *functional* derangements, our author proceeds to the *structural* diseases of the bladder; diseases which may affect all the tunics of the organ either individually or collectively, and in which the inflammatory conditions that arise may exist, either in an acute or chronic form.

In *acute inflammation of the mucous membrane of the bladder*, the symptoms are most painful and urgent, and not unfrequently terminate in ulceration and perforation of the parietes of the bladder and in death. The treatment our author recommends is, local detraction of blood by cupping and leeches, and full doses of morphia into the stomach, or by injection or suppository, with counter irritation above the pubes, and the use of the hip-bath.

Chronic inflammation of the mucous membrane of the bladder is chiefly distinguished, among other symptoms, by the copious mucous discharge. This symptom, is, indeed, so characteristic that the disease is frequently termed

vesical catarrh, and although attended with less pain than acute inflammation of the membrane, is often a very tedious and intractable disorder. When the disease is attended with a great secretion of mucus, the most useful medicines are:—decoctions of the uva ursi, with the muriatic tincture of iron, and small doses of powdered galls and nitre; decoctions of pareira brava combined with nitric, or nitromuriatic acid, or dilute phosphoric acid; copaiba in combination with small doses of zinc, chio turpentine or sulphate of iron; cauterization of the mucous membrane after the manner of Lallemande.

Professor Lallemande has successfully practised cauterization of the mucous membrane of the bladder in chronic catarrh, with solid nitrate of silver. The following is his mode of employing this remedy:—He uses a large catheter (of pure silver, as the caustic acts upon it if there is any alloy) open at both ends having two sorts of stilets, according to the part intended to be cauterized; at the extremity of each stilet is a small excavation, containing the caustic, which is first pulverized, and then placed in the excavation over a spirit lamp, which fuses and moulds it to the cavity. When the instrument is prepared, introduce into the bladder an ordinary catheter, in order to empty it completely. This precaution is strictly necessary, for the urine would dissolve the caustic, and prevent its directly affecting the mucous membrane. When this has been withdrawn, the instrument bearing the caustic is to be introduced (closed), and the moment it has entered the bladder you are to push the stilet, and rapidly turn the porte caustique from side to side two or three times, and then pull the stilet into the instrument and withdraw it; our object should be to touch the surface in as many points as possible. While the instrument is within the bladder, the latter contracts and grasps it, while the kidneys secrete a small quantity of urine, as the lachrymal gland secretes tears when the conjunctiva is cauterized; but this small quantity of liquid, far from being hurtful, is on the contrary favourable; as it acts as a vehicle to the portion it does not decompose, and conveys it equally over the surface of the membrane. Patients feel, at the moment, a sharp pain at the neck of the bladder, and in the rectum, described by them, as if they were pinched, but much more supportable than the continued dull pain of catarrh; there is now an irresistible desire to pass water, and as the bladder is nearly empty, very little is voided, and this causes a burning along the urethra, often accompanied by some drops of blood. This desire is renewed every moment, causing violent, but useless, efforts. These gradually decrease, and on the second and third day, there is no longer any pain on making water, and a few small grey eschars, like burned paper, come away with the urine. This occurs in a large number of patients, but in some more susceptible, the process does not proceed so simply, particularly if you have used the porte caustique too long. In this case retention of urine follows, which lasts from three to thirty-six hours; even here we must not be in too great a hurry to use the catheter; as a warm bath, a few narcotic lavements, emollient drinks, some tartrate of soda, with infus. senne, and sometimes a few leeches will cause the spasms to yield; if not, some belladonna to the meatus may be tried, always taking care to use antiphlogistics with moderation in the beginning, as inflammation is necessary to the cure. In a majority of cases one cauterization is sufficient to effect a cure; when it happens otherwise, a second, and even a third application may be necessary, but Monsieur L. states that he never saw a case requiring a fourth.

We shall pass over the chapter devoted to acute and chronic inflammation of the *muscular coat* of the bladder, first, because that disease very rarely happens idiopathically, and, secondly, because the treatment is similar to that of acute and chronic inflammation respectively of the mucous tunic.

Neither will it be necessary for us to analyse the short chapter on inflammation of the peri-

toneal coat, as there is nothing peculiar either in the symptoms or treatment of this affection.

We think the chapter on *spasm of the bladder* might as well have been omitted, as it is extremely doubtful whether such a disease ever occurs in the healthy bladder, and unquestionably in 99 cases out of the 100, it is a symptom merely of some other affection, and which must consequently be treated with due regard to the exciting cause. The chapter on *fungus hæmatodes and cancer* of the bladder, is extremely meagre and imperfect in its details; such cases, however, are unfortunately incurable, and the treatment is at best palliative.

The chapter on *vesical calculi*, which follows, is not liable to the same animadversion. It gives a condensed outline of the more important facts connected with the history and treatment, medical and surgical, of vesical calculi, and although we can discover here nothing absolutely new, we can recommend this chapter as worthy of the attentive perusal of the junior student. A short, but interesting, chapter is also given on *wounds and injuries of the bladder*, in which the treatment of vesico-vaginal fistula by the ligature, and by the actual and potential cautery is clearly related, when our author passes to the last grand division of his subject, diseases of the prostate gland. Our author discusses this very important part of his subject in three short chapters under the titles respectively, of acute inflammation of the prostate, chronic inflammation of the prostate and prostatic calculi.

Acute inflammation of the prostate is treated upon general principles by general and local depletion. The principle upon which chronic enlargements of this body should be treated, is not so well established. Much depends upon the cause of the enlargement, upon the part of the gland affected, and upon the age and constitution of the patient—but for particulars we must refer to the work itself.

Upon the whole we are inclined to regard the work before us with an indulgent eye. The merit of the work consists in a simple and intelligible statement of what is known upon the subject of which the author treats. There is no pretension to originality in the arrangement of the subject, in the facts adduced or in the treatment proposed. The book is a useful compilation and no more.

The Calotype familiarly explained, being a Treatise on its Objects and Uses, and the Methods of Preparing the Sensitive Paper, and taking Pictures by the Agency of Light. By W. BAILEIGH BAXTER, M.R.C.S., &c. Renshaw.

THIS is a pleasing little brochure, of which more may be truly said than of many a larger work—it fulfils its mission very completely. The writer, after calling attention to the way in which light acts in the production of pictures on paper or metallic plates, explaining the effects of light on plants, animals, and chemical compounds, gives a brief history of photography, beginning with the efforts of Wedgwood and Sir Humphrey Davy, and concluding with the almost concurrent discoveries of Daguerre and Talbot—to the latter of whom we are indebted for that beautiful improvement in Photography—which we imagine will be now called Calotypography. We are told that,—

The Calotype differs very materially from the earlier photographic processes in many points. We shall now proceed to enumerate a few of the most prominent. The image formed upon the Calotype paper is at first invisible; for although the object has been reflected on the paper in the camera, or even has been in contact with it, yet on removing it from the light no trace can be perceived. This certainly is the most mysterious

part of the process, and one which arrests almost more than any other the attention of the manipulator. The paper prepared by this process is also vastly more sensitive; however, this, as we have previously remarked, is a difference rather of degree than of kind. The fixation of the pictures is also so much superior, that it admits of a great number of copies being taken from each camera picture, which could not be done by the former method, at least not with any certainty.

In taking an image in the camera by the common Calotype process, the first impression is always a negative one. By a negative picture we mean one in which the lights and shadows are reversed, giving the whole an appearance not conformable to nature. For instance, if we were to copy a piece of black lace, we should have in the first case white lace upon a dark ground; but upon taking a second copy, upon sensitive paper, we should then have what is termed a positive image, conformable to the original; viz., black lace upon a white ground. In sitting for a portrait, the same result would take place if the common Calotype mode were employed; and although Mr. Talbot has pointed out a method of taking positive pictures at once, yet, as it is somewhat complicated and difficult, we would strongly recommend the experimenter to take images by the common mode first, and then recopy them upon sensitive paper.

The various mechanical and chemical agents, with their mode of use, are then minutely described, and the author concludes with an eloquent peroration on the immense utility which this miracle of modern operation is likely to prove to the interests of science and literature. Our readers who take an interest in the subject will do well to purchase this little treatise.

A Letter from the Earl of Shrewsbury to Ambrose Lisle Phillipps, Esq., descriptive of the Estatica of Caldaro, and the Addolorata of Capriana; being a second edition, revised and corrected: to which is added the relation of three successive visits to the Estatica of Monte Sansavino, in May, 1842. London: CHARLES DOLMAN; pp. 143.

WE have had this work on our table for the last fortnight, but have been prevented noticing it from the difficulty of forming an opinion (worthy of being announced,) as to whether the cases detailed in it are simply cases of morbid action, though rare, acknowledged by nosologists; or, that they are, as the noble author thinks, inexplicable by the natural laws, and therefore to be referred to a direct interposition of providence.

That the latter is the readiest mode of accounting for the phenomena, we must certainly concede, but whether it is the most satisfactory admits of question. In the meantime, however, without pledging ourselves to any opinion, either *pro.* or *con.*, we shall abridge the narrative and leave our readers to pronounce their own judgment on the subject.

Maria Mörl, the estatica of Caldaro—since retired into a monastery to avoid the crowds of persons who pressed to see her—was first seen by Lord Shrewsbury on the 20th May, 1841, and the description he gives of her is extremely beautiful and interesting. She was kneeling on her bed, with her eyes uplifted and her hands clasped, as if in the attitude of prayer—motionless as a statue; her hair long, black, and flowing; her head uncovered, and the elegance of a naturally fine figure, rendered interesting by a loose white wrapper, was enhanced by the grace of her attitude. When in this state she neither hears nor sees; but remains fixed and motionless, like a waxen or marble figure—a condition which nosologists would describe by the word “cateleptiform.” She remains in this posture several hours, but can always be awakened from it by her confessor. The backs of her hands are marked

with stigmata, which she is desirous of concealing by the ruffles sewed to her sleeves. These stigmata, Lord Shrewsbury was informed, occasionally emitted blood, and were also to be seen on the feet, and—as the females about her assured her confessor—on the side also; in short, these marks correspond to the wounds in the hands, feet, and side of the Messiah. On another occasion one of Lord Shrewsbury's party visited her, and found her convulsed with grief, the lower part of her face almost black, and her agony was so great that she threw herself back upon the pillow, with her arms outstretched as if in the horrors of crucifixion. He was informed that she usually remained two hours in that condition. Yet, notwithstanding this suffering, she is so susceptible of external impressions, that whenever and whatever time of the day the sacrament was carried by, her body involuntarily turned towards it, being elevated as if by some supernatural agency upon the very tips of her toes. This has been observed by many persons; among others, Prince Liebnowsky, who visited her in Oct. 1839. She is of an ancient and respectable family, who possess a competency, and are highly respected. She was born in Oct. 1812, and early indicated signs of an extremely susceptible temperament. In 1832, when she was 20 years old, she evinced the first signs of this static condition, by falling into reverie every time she received the holy communion. Her confessor being aware of this, and knowing that the trance, or ecstasy, lasted six or eight hours, or even much longer, carried “the blessed sacrament to her at three o'clock in the morning,” after which she fell immediately into a state of ecstasy. He then left her, and being engaged that day and the next morning, “he did not return to her till three o'clock on the afternoon of the following day, when he found her kneeling in the exact position in which he had left her thirty-six hours before.” This fact, as may be imagined, created a great sensation, and thousands crowded to see her; but, the news reaching the Austrian government, she was interdicted from receiving processions of people. The Bishop of Trent also went in person and “instituted an inquiry upon oath into all the circumstances of the case, to prevent the possibility of deception or illusion.” Such is the account of Maria Mörl. With the arguments which Lord Shrewsbury employs to establish his views of these phenomena, we must be excused intermeddling, as any theological disquisition would be misplaced in the “MEDICAL TIMES.”

The following is a brief account of Domenica Luzzari, the addolorata of Capriana. We prefix, however, this very interesting and beautiful description of Lord Shrewsbury's ride from Neumarkt to Capriana. “Having the highway also at Neumarkt, we ascended for some ten or twelve miles along a rough, though tolerable mountain road, in those same incommensurable carriages which had conveyed us to Caldaro. The scenery was at once lively, picturesque, and grand, commanding a fine view of Caldaro looking down upon the mountain tops, till a descent of some four or five miles brought us, after about five hours and a half of journeying, to the large and populous village of Cavalese. Here it became necessary to mount on horseback, for the purpose of ascending by a very long, narrow, and rugged way, to the lonely hamlet of Capriana, situated near the extremity of one of those solitary but beautiful and romantic glens so common to alpine countries. Every circumstance was in keeping with the mournful spectacle we were to witness at the termination of our pilgrimage. The

rude, wild, and desolate scene—the lowering aspect of the sky—the steep rocky declivities of the mountains, darkened with gloomy forests of fir, numbers of which, almost the only produce of this inhospitable clime, were floating down a deep impetuous torrent which foamed its way beneath us—the great length, (some eight or ten miles,) the difficulty and apparent danger of the road—the many mountain shrubs covered with their blossoms, and an immense variety of alpine flowers, which ever charmed us by the beauty of their form and enlivened our course by the brilliancy of their colours, many of them blooming with the most lovely luxuriance upon the very edge of the precipice, or on the most ariel rock,—all conspired to present to our imaginations a lively picture of the toilsome, dangerous, yet seductive paths of life, to turn our thoughts to the ways and the works of God, and rivet our attention on the object of our search; till on a sudden turn of the narrow valley, still gaining in wild and picturesque effect as we advanced, and now magnificently closed by a splendid alp in the long and vapory distance, we descended through the thick wood which surrounded us, and at no great interval, seated upon an elevated knoll of the mountain, and not below the regions of perpetual snow, the small and humble village in which, for the fulfilment of his own inscrutable designs, it has pleased “Him, who woundeth and healeth, to place this singular phenomenon”—pp. 29-31. His Lordship found Domenica in her usual position, which is on her back, in bed. On her forehead were several punctures, as distinct as if marked with a large pin, and the wounds appeared quite fresh, though no blood was flowing from them. Beneath was a regular interval of about a quarter of an inch, also perfectly free from blood, so as to give the punctures, which represented the wounds from the crown of thorns, the most perfect possible degree of distinctness. Below this line, her forehead, eyelids, nose, and cheeks, were entirely covered with blood, having only the upper lip, and the whole of the lower jaw free from it. It had flowed in the morning and was then dry. Her hands were firmly clasped over her chest as of one in a state of considerable pain, and her whole frame was convulsed with a short, quick, tremulous motion. The blood was still oozing perceptibly from the wounds in the back of her head, though the blood and serum which had flowed from them did not extend above two, or at most, three inches.”—(p. 32.)

Her feet were also similarly marked. But the remarkable feature in this case is, that “on the 15th of August next (this was written in 1841) it will be eight years, since she eat, drank, or slept!”—(p. 35.) This is an astonishing statement, which we are content to repeat on the authority of the noble author, without comment. This person also, like Maria Mörl, is a martyr to some obscure disease, or nervous affection. At one period of her life “her sufferings were so great that her screams were often heard at a great distance;”—(p. 36) and “it was under these circumstances that, during one night, her whole head was encircled by small wounds, fifty-three in number, which opened and bled profusely every Friday. Fourteen days after the crown of thorns, she received the stigmata in the hands and feet, and the wound in the side.”—(p. 37.)

It will be seen from these descriptions that the cases present very singular anomalies, even supposing we view them as examples of morbid action of the animal economy. And even viewed as such, we must take into considera-

tion the element of imagination, a cause of consequence of phenomena, especially in cases of *noëvi*, or mother marks, not admitted into the category of causes by some nosologists. How then are we to get out of the difficulty? We protest we must take time to consider the subject more fully before we venture any decided opinion, and in the meantime we recommend this very curious pamphlet, with the still more extraordinary case of Domenica Barbagli, in the appendix, to the earnest consideration of our readers.

EXTRACTS FROM FOREIGN JOURNALS.

(Translated for the ‘Medical Times.’)

GERMAN.—*Taxis in Strangulated Scrotal Hernia.* By Dr. OLLENROTH, of Berlin.—B. J. K., a healthy robust man *æt.* 57, had for some years suffered from scrotal hernia of the right side, without mentioning it to me, his medical attendant for more than 20 years. False feelings of shame, and ignorance of the danger to which he was exposed, together with the circumstance that he had from time to time always succeeded in returning the bowels into the abdomen without assistance, had prevented his making the discovery to me. Thus he went on, always without a hernial bandage, performing many journeys, and using other bodily efforts necessary in his occupations. One afternoon, after a full dinner of pease and salted meat, whilst walking on some necessary business which he could not well neglect, he perceived a powerful protrusion of the hernia, bearing down of the belly, præcordial anguish, and vehement colicky pains: he constrained to suppress these, at least, so as not to be overpowered by them, continued walking in his affairs some hours, and after completing his business began to return home. He had not gone, perhaps, more than 1,500 steps on his return home, when the pains so completely overpowered him that he was constrained to make a halt at the house of a friend, that he might get some relief; after sitting here, having something recovered, he disposed himself, yet in great pain, to go home on foot. Here I found the sufferer after 8 P. M. lying stretched out on the sofa, complaining of bearing down, præcordial anguish, colicky pains, and obstruction; after I had prescribed *infus. sennæ composit.*, and an aperient lavement, I learned, entirely by the bye, that he had suffered from this hernia for some years; that now, as often at other times, it had come down, and had been soon reduced by himself without other assistance, but now would not give way. Upon making examination, I found a scrotal hernia on the right side as large as a fist and of stony hardness, which obstinately withstood every attempt at reposition until 10 P. M., when the sick man himself forbade the continuance of these very painful attempts, whilst he hoped during the night to be more fortunate by his own endeavours, in which he had till now always succeeded. The next morning, having been called about 4 A. M., I found the patient moaning in the most vehement pain, from the yet more protruded hernia, which was now become intolerable upon the least touch. The lavement prescribed on the preceding evening had caused one evacuation of the lower bowels, and during the night he had vomited three times the contents of the stomach, with mucus and bile; together with vehement painful reaction in the hernia, which in the morning also withstood every attempt at reposition. In this desperate situation, with the already far advanced inflammation of the knot of intestine, crammed full of hard excrement, I resolved, at latest at 7 A. M. to perform

the operation of herniotomy, if an enema with acetum saturninum, a large bleeding, and a warm bath should not have made way for a fortunate taxis. A brother surgeon, Müller, whom I had commissioned with the carrying out of these measures, immediately took advantage of the relaxation from the fainting of the patient, after the glyster and the bleeding, that shewed itself by a sudden rumbling in the hernia, and reduced it instantly and fortunately without difficulty. To the enema was added six drachms of liquor plumbi. The patient, upon whom was placed a proper hernial bandage, soon recovered by the continued employment of mild aperient means, and is now completely restored.

This brilliant success is manifestly to be ascribed to the paralyzing operation of the acetum saturninum upon the intestinal canal, and the relaxing effects of the bleeding, which were both equally timely employed.

ITALIAN.—*False Articulation of the Humerus, from Non-Consolidated Fracture, cured by the Seton.* By M. BARONI.—Case: A man 37 years of age, of good constitution, while discharging a firelock sustained a fracture of the middle part of the right humerus, against which the butt end of the gun was resting. Having entered the hospital, the arm was treated for the first sixteen days with poultices and fomentations, after which time it was placed in splinters; but the fracture not being consolidated in thirty days, some plaster was applied and the patient left. He returned some time after and placed himself under the care of M. Baroni. The two fragments of the bone were oblique in direction, and rode one over the other for the space of an inch; they were very moveable, but excited no pain. A seton-needle, armed with cotton, was passed between the broken ends of the bone, which were held apart by an assistant, and the thread left in this position: very slight re-action occurred. Consolidation not having advanced at the end of some weeks, a more perfect apparatus was applied to the arm. At this period the patient was attacked with fever, which he attributed to a chill; at the same time the suppuration from the seton became more abundant, and the inflammation around the fracture spread itself to the arm-pit, where an abscess formed and was opened. From this period the consolidation advanced so rapidly that the seton was withdrawn, after remaining in the arm for nearly two months. The cure became complete, and the limb regained its original dimensions.

The success in this case was perfect; but we think, that in a fracture of such recent date, and the non-consolidation of which appeared to be in a great measure owing to the faultiness of the original treatment, it would have been safer in the first instance to have had recourse to more gentle means—such as a more lengthened application of the splints, or the rubbing of the fragments one against the other. The seton is, however, a valuable remedy where such means fail.

New Surgical Operation: Sub-Cutaneous Extirpation of the Lower Jaw-bone. By M. SIGNORONI.—The patient forming the subject of this operation was a robust young woman, of a sanguineous temperament, but affected with osteo-sarcoma of the lower jaw. The tumour, which had developed itself between the layers of the bone, had acquired the size of the fist, and occupied the space between the first incisor tooth and the neck of the right condyle. Neither the external skin, nor the mucous membrane of the mouth, corresponding

to the tumour, presented a trace of alteration: the disease was entirely confined to the bone, and the general health was good. Anxious to spare this young patient the deformity consequent on other proceedings, M. Signoroni conceived a means of removing the diseased portion of bone without making any external incisions. This proceeding would also, he considered, have the advantage of leaving untouched the duct of Steno, the facial artery and the nervous branches of this region. The process which he has adopted embraces three principal stages: 1st., the isolation of the tumour; 2d. the division of the diseased bone; 3d. the extraction of the detached part. To accomplish these various stages, he has invented three especial instruments. The first, (*scalpellino scarnificatore*), is used for the division of the soft parts, and is best compared to a minute hatchet; the two others are designed for the section of the bone, and are denominated "bone nippers." One, the smaller, is shaped like the beak of a parrot; the other, much larger, has its branches arranged like the bill of a crane,—that is to say, curved at the extremity and perpendicular in the direction of the handle. Armed with these instruments he proceeds to operate as follows:—*First stage*: the mouth being opened as wide as possible, and the tooth corresponding to the anterior border of the diseased mass removed, he commences the isolation of the affected portion by making an incision, which divides the buccal mucous membrane at its union with the gums around the whole extent of the cancer, and even some lines beyond, for the greater convenience of the operation. Having thus denuded the body of the bone, he performs the same process for the ascending ramus, if the disease extend to it, and also divides the muscles inserted into this part, the buccinator, masseter and external pterygoid. The isolation is completed by a few incisions upon that part of the bone corresponding to the floor of the mouth, dividing the parts upon the inner edge of the maxilla, and, consequently, cutting the genio-glossi, genio-hyoid, and mylo-hyoid muscles. The internal part of the ascending ramus is then isolated, by dividing the insertions of the internal pterygoid and a portion of the temporal muscles.—*The second stage* comprises the section of the bone, by means of the nippers. The larger serves to divide the body of the bone: for this purpose, a branch is applied upon either surface of the bone, and the simple approximation of the handles of the instrument suffices for this part of the operation. This done, the surgeon takes the small nippers, having straight branches and a curved extremity, and endeavours to fix them upon the ascending ramus of the jaw, beyond the limits of the disease, and in such a manner that the concave branch of the instrument corresponds to the outer surface of the bone, and the convex branch to its inner surface. This second section is executed with the greatest facility.—*Third stage*: The extraction of the detached portion of bone is a comparatively easy matter. The tumour being separated from all its attachments is easily made to pass within the cavity of the mouth; if too large to be extracted readily through this opening, it may be divided into two portions.

Such is the operation proposed by M. Signoroni; but there are several objections which militate most powerfully against this proceeding. For instance,—should the carotid artery become accidentally wounded during the operation, there would be much greater difficulty in applying any means to arrest the hæmorrhage, and, consequently, greater danger of a fatal loss of blood than in the ordinary operation. But the most serious argument of all

against this process is, that it is opposed to one of the most incontestable principles of pathology, viz., the absolute necessity of the entire removal of the whole of the diseased tissues, and even of those menaced with the disease. Now, by operating from the interior of the mouth, how are we to ascertain the limits of the disease? when, instead of laying the parts freely open to view, so as to judge of their condition, we have to operate in a situation entirely removed from sight. How are we, then, to ascertain if the soft parts, which in this operation we cut at hazard from their connection with the bone, already partake of the disease, or whether they may be preserved with safety? This objection, so powerful against this mode of operation in cancerous diseases of the bone, does not, however, extend to some other affections,—as exostosis, or necrosis of the maxillary bone, in which the process of M. Signoroni is a most valuable improvement.

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MEDICAL MEMS. OF THE WEEK.

ANCIENT TREATMENT OF SMALL POX.—The older physicians, says Dr. Watson, attempted to force out, through the skin, the morbid matter existing in the blood. The eruption they considered to be the natural and only cure; and adopting the vulgar maxim, that "it was better out than in," they did all they could to promote a copious eruption, by a hot regimen, by covering the patient with bed clothes, by keeping the doors and windows jealously closed, and excluding every breath of fresh air, and sometimes by administering wine and cordials. The celebrated John of Gaddesden, the author of that curious book the *Rosa Anglica*, improved even upon this. He surrounded the half-suffocated patient with red curtains, red walls, red furniture of all kinds: every thing he saw was to be red; for in that colour there was, he pretended, a peculiar virtue. This John of Gaddesden, was a very sad knave, and the first Englishman, I believe, who had the luck to be made Court physician. He had one medicine so good as to be fit for the rich only; and he recommended a double dose for the wealthy. "Duplum sit, si prodivite." He flourished in the 14th century. Sydenham was the first, in this country, to employ the opposite or cool regimen in small-pox: and although his prejudiced contemporaries refused to follow his example, and adopt his practice, he confidently predicted its final triumph,—"obtenebit demum me vitâ functo." But it was subsequently to the introduction of the method of inoculation that the cooling treatment was fairly established, by the Suttons—two brothers, one of whom Robert, lived at Bury St. Edmunds; the other, Daniel, at Ingatestone, in Essex. These men, wiser in their generation than the regular physicians, had the good sense to pursue the same plan of general management which had been so prosperous in the East, whence the practice of engrafting was originally imported. Daniel, in particular, became famous for his successful inoculations: and the great secret of his success seems to have consisted in making one puncture only; exposing his patients much and

often to a cool atmosphere; supplying them freely with refrigerant drinks; and restricting them to a spare diet. Under this course, Cullen, who adopted it from the Suttons, declares that ninety-nine times in the hundred inoculation imparts a distinct small-pox, and very generally of the mildest form.

DRY TAPPING.—Sarah Firth, aged 42, of Sprotborough, had for some months been becoming gradually emaciated, with an enlarged and increasing abdomen, which had then become immensely distended, with very evident fluctuation; there was considerable anasarca of the legs; distressing sickness; costiveness and purging alternately; menstruation regular, though less than when in health; tongue red; countenance anxious; pulse quick and weak. The swelling of the abdomen commenced on the right side, many months ago. The various sorts of treatment adopted afforded no relief, except what she derived from severe purging, which somewhat abated the distension. She would not, however, consent to have the fluid evacuated until the distension was so great that the abdomen was quite tender to the touch, and she was occasionally delirious from the pain. Dr. Scholfield and Mr. Storrs concurred in the propriety of operating as for ovarian dropsy. On withdrawing the trocar not a drop of fluid passed through the canula, but at length, by pressure, and by repeatedly passing a probe through the canula, about a pint of gelatinous fluid was obtained. Nothing escaped from the puncture when the canula was withdrawn, and the puncture was merely covered with a strip of adhesive plaster. She continued much in the same state for some days, the distress from distension becoming more and more severe. Seven days after she had got relief from the opening made by the trocar, through which a large quantity of fluid had come; it was partly gelatinous and partly serous, and escaped with great difficulty. The opening was dilated by means of a small piece of sponge, and about a gallon more of semifluid obtained. On the following day she felt so much relieved that she was anxious to have this repeated, which was done. After this the fluid escaped by degrees. The sickness continued; the bowels could not be emptied by purgatives; the mucous membrane of the tongue and mouth became aphthous; vomiting incessant; and she gradually sank, and died Nov. 20.—On the next day the body was opened, and the following appearances were observed. A considerable quantity of semipurulent fluid in the cavity of the abdomen, the parietes of which were lined by loose lymph. On the right side was a large ovarian sac, containing a considerable quantity of gelatinous matter, and several small hydatids, and at the bottom of the sac was a large tumour filling the greater part of the pelvis, and containing a large quantity of fatty matter, some hair, and a quantity of shapeless bones. The uterus was hard, and pushed forwards by the tumor; the bladder was capacious and natural; the rectum empty, and the colon distended with scybala from the tumor pressing on the rectum, and preventing the passage of solid faeces; the other intestines were natural. The liver was paler than usual, but not much altered in texture; the remaining viscera were healthy, except the stomach, which was considerably inflamed, and the left ureter was also considerably enlarged. There was a considerable quantity of bloody serum in the pericardium, otherwise all the viscera of the thorax were healthy. On a more minute inspection of the contents of the tumor, three teeth were found, each complete of its kind—viz., one incisor, one bicuspid, and one molar tooth.

THE BILATERAL OPERATION FOR THE STONE.—Dr. Ribes, of the Hotel Royal des Invalides, claims the merit of this discovery. The patient should be placed on a table, with his head lower than his pelvis, so that the region of the perineum and anus may be presented in their full extent, and the pubes be on a nearly horizontal plan. The thighs, of course, must be separated and secured. A catheter with a double groove, one to the right, another to the left, the two meeting at the point of the greatest curve—that is, at the part corresponding to the base of the bulb and membranous portion of the urethra—is next introduced, and confided to an assistant, who at the same time raises the scrotum, and places the skin of the perineum on the stretch. The anus being depressed by three fingers of the left hand, a semicircular or crescent-shaped incision from right to left is made in the perineum, a little above the bowel, dividing the skin, part of the sphincter, and transversus perinei. Its convexity is to be forwards, the concavity towards the anus. The next step is to pass the index finger into the wound, in order to depress the rectum, to make way by the scalpel as far as the membranous part of the urethra, to incise the canal, and to prolong the incision right and left in the body of the prostate. The operation is then to be completed in the usual way. The advantages of the operation are opening a less oblique, more easy and straight route to the bladder, in the course of which no arterial branch is injured, by which hæmorrhage of any importance might be caused, the greater safety of the vesiculæ seminales, and a more commodious and more free aperture for the introduction of instruments, and for the extraction of the stone. This operation is not the same as that recommended by Celsus. In the Celsian proceeding, the concavity of the crescent-shaped incision is the reverse of the one here recommended; Celsus incised the neck of the bladder, and thus withdrew the stone, thereby endangering the vesiculæ seminales and the vasa deferentia, whilst in this operation, the membranous portion of the urethra, the prostate gland, and neck of the bladder, are divided horizontally, by which such danger is avoided.

CURIOUS CASE.—Dr. Crolly, of Montmellick, publishes an interesting cure of empyema and displacement of the heart, the result of effusion consequent on intense inflammation of the pleura and the other structures of the lungs, the subject of which died only after two years illness. The subject of the disease was Mr. Henry Jones, aged twenty-three years, a young man of very delicate frame, and narrowly formed chest. The malady commenced with intense bronchitis, pneumonia of the lower lobe of each lung, and extensive pleuritis—each of the structures of the lungs were acutely engaged—a combination of disease demanding prompt, energetic, and decided measures; and it is strange, that with such abnormal deviations the patient could have lived so long; at times also free from all suffering or distress. The pulse, however, continued quick, the unnatural circumstances in which the heart was placed by transposition, kept up its irritability. Occasional palliative medicines, and a seton in the left side, were the only measures had recourse to at this period. Within the last few months, however, his health became again broken—irritative fever set in with violence, and the collection of fluid, which it was hoped might have been absorbed, ultimately distended the parietes of the left side of the chest, and produced so much pain and distress as to require the operation of paracentesis. There was now palpable evidence of empyema. The side

was obviously enlarged, with protrusion of the intercostal spaces, more particularly between the tenth and eleventh ribs, anteriorly and posteriorly, the integuments of which were œdematous and painful, with an erythematous blush, and conveyed to the touch a sense of fluctuation. Even the patient himself at times experienced the sound of fluctuation in the chest. He was unable to lie on the sound side, (the right) his usual position in bed being either on his back or the diseased side. Respiration was partially audible at the posterior part of the left lung, along the side of the vertebral column. This, however, was rather bronchial respiration, than the respiratory murmur or vesicular respiration. Respiration was null over the remainder of the left side. The sound on percussion of the same side was dull or tympanitic, according as the patient assumed the horizontal or erect posture, varying with the situation of the contained fluid. *Metallic tinkling*, was, distinctly recognised, on applying the cylinder beneath the left clavicle. This, with the sound of fluctuation on succession, were proofs that pleuro-pneumothorax existed. From the pressure of the fluid, the diaphragm was forced downwards into the abdomen, and produced a fulness and sense of distention in the epigastrium. The heart was situated in the *right side of the chest*, and its pulsations were plainly to be felt and even seen near the right nipple, about one inch from its sternal edge, in the space between the fifth and sixth ribs. Its sounds were natural, (although its action was permanently rapid) and were audible all over the chest. Arterial pulsations were discernible in the head and neck, so much so as to communicate a tremulous motion to the bed curtains. Throughout the right lung the healthy respiratory murmur was plainly audible, and even puerile, owing to the increased and compensating action devolving upon it, and the sound on percussion was particularly clear. By the conjoined advice of Drs. Graves and Stokes, and Surgeons Peile, Cusack, and Morrison, who all took a great interest in the case, the fluid was drawn off by Surgeon Morrison. A large collection of unmixed pus, totally devoid of odour, was discharged, a considerable quantity being allowed to remain, it not having been deemed judicious to draw off the entire quantity at once. The fever and general distress were thereby temporarily diminished, however only to return. The fluid, having been rapidly secreted again, was obliged to be drawn off a second time, at the urgent solicitation of the patient, and then by the daily introduction of a probe, and the occasional insertion of a tent of lint, the orifice was kept patulous, and continued to discharge the fluid to the amount of half a pint or a pint daily, which afforded temporary relief. Large quantities of air issued from the orifice at each dressing. Battley's sedative liquor was occasionally had recourse to to procure rest. After the operation, the patient's health at one time appeared to improve, so that a hope was entertained that nature would have taken the cure into her own hands—that she would cause the fluid to be absorbed, and prove triumphant when art had exhausted its resources to no purpose. To promote that much-to-be-desired consummation, small doses of hydriodate of potash, in combination with quinine, were prescribed, and the general strength endeavoured to be sustained by the most nutritive food. However, little was to be expected from so untoward a combination of circumstances. The irritative fever now assumed a well-marked hectic type. It became a slow, wasting fever. The pulse never fell below 120, and was generally more rapid—the skin

was hot and dry during the day, and towards morning a profuse perspiration bathed the upper parts of the body—the cheeks were brightly crimsoned at one time, pale and haggard at another, with an expression of countenance bespeaking anxiety and distress. Respirations were 24, and embarrassed, being short and jerky; but strange to say, throughout his entire illness the patient seldom had cough—the appetite soon failed—the muscles became atrophied, and emaciation extreme—the position of the body was now habitually bent—the stomach became latterly much deranged. This symptom, together with pain in swallowing, distressed him considerably, and was so much increased by lying down, that during the latter part of his illness, he continued for days and nights together sitting up, supported by pillows. These sensations (accounted for by the close association and sympathy of the respiratory and circulatory apparatus, with the stomach and œsophagus, through the medium of the eighth pair of nerves,) derived some relief from compound rhubarb pill and dried soda. He also suffered much from severe pain in the front of the chest, apparently of a pleuritic nature. This was attempted to be relieved by the counter-irritation of croton oil and a blister, with a dose of the acetous tincture of opium. However, at length, œdema of the feet and legs supervening, rendered the prognosis more gloomy—the dilapidated system gradually gave way—remedies and art proved unavailing, and this young man at length sunk, apparently worn out from his struggle with disease, and the exhaustion of protracted hectic.—*Post-Mortem Examination:* On Autopsy, August, 5th, 1842, thirty-eight hours after death; decomposition far advanced, especially in the abdomen; extreme emaciation. On raising the sternum, numerous thick and strong bands of lymph, of various length, were observed passing from the pleura costalis to the plura pulmonalis of the right side. An *immense cavern* presented itself in the left side of the chest; it appeared as if the contents had been completely lifted out of it, *nothing in fact but the bare bony case was to be seen*, except about a quart of dark sanguinolent matter lying at the bottom. The sides of the cavern were densely lined with a coating of lymph, constituting a factitious membrane, which, during life, possessed the physiological property of secreting the morbid matter of empyema. It presented rather the appearance of a cavity of a large abscess than of a surface lined with a serous membrane. Several very strong bands of lymph stretched across the cavern, particularly at the upper part, forming so many shelves or partitions. At first no trace of the left lung could be detected, but, on a close examination, its compressed parenchyma was found lying on the sides of the vertebræ, and reduced to the smallest possible dimensions. At first view it was not recognised as lung. On examining it more particularly, it was found studded with tubercles, about the size of hemp seeds, and gritty to the touch. No remains of vesicular structure were observable; in fact it presented the appearance called *carnified lung*, the pulmonary vessels and bronchial tubes being completely matted into one condensed tissue. No communication could be detected between the bronchus and the cavity. The *heart*, instead of occupying its natural position in the left side of the chest, was found lying at the *right side*, its apex corresponding to the space between the fifth and sixth ribs. *A strong band of lymph of ligamentous appearance, arising from the anterior mediastinum, attached itself to the right lung; this, with the adhesion of the pericardium to the diaphragm* fettered the heart in its abnormal

position. The pericardium was so universally adherent to the heart; that it could not be separated without removing the muscular fibres of the heart. The muscular substance of the latter was pale and flabby. The aortic and other valves were healthy. The right lung seemed rather larger than usual, (probably owing to its having had double duty to perform during the last two years of the patient's life) its structure was sound and free from tuberculous deposit. It was gratifying to find that the examination after death fully confirmed the views entertained of the case during life. What moved the heart from its natural position to the right side was sufficiently obvious; but why it did not resume its original situation, when the accumulated fluid was drawn off, remained problematical until explained by dissection. The strong bands of organised lymph which passed from the anterior mediastinum to the left lung, and the adhesion of the pericardium to the diaphragm in the new position, explain the physical impossibility for the heart to have ever been restored to its pristine situation. Either of these morbid adhesions would have separately been sufficient to fetter the heart, and keep it permanently displaced. Although no communication was discovered between the bronchus and the enormous cavern, owing to the disorganized state of the parts, yet that such an opening existed, there can be but little doubt, from the fact of the metallic tinkling, and the sound on succession being so obvious during life; besides the fact of large quantities of air having passed out through the orifice in the side. It is, indeed, doubted by the most respectable writers, "that pneumo-thorax ever occurs by the putrefactive decomposition of a pleuritic effusion." The pleural cavity having been occupied by air and pus, (the lung being compressed against the spine and mediastinum by both these fluids,) the double lesion of empyema and pneumothorax existed, constituting the complication called pleuro-pneumo-thorax. The acute pain of the chest complained of by the patient in the last days of his illness, which I considered pleuritic, was probably produced by inflammation of the pleura forming the walls of the enormous cavern, or perhaps, more correctly speaking, of its adventitious false membrane, such structures being liable to a variety of morbid actions. The admission of atmospheric air into the cavity would be alone capable of producing inflammation of that membrane.

MEDICAL NEWS.

THE GLASGOW SCHOOLS OF MEDICINE.—We learn from a correspondent that these are sharing the common fate of most other British Medical Schools, and may be described as in a most deplorable state. The professorship of anatomy at the college, is a mere nullity for any purposes of education; and in the other schools, our correspondent assures us, there is no improvement since the last session. This circumstance has led to the foundation of a new school, which is to be called the Laënnec College, the heads of which, we understand, have forwarded a requisition to Dr. Hunter, the late Andersonian Professor of Anatomy, to accept the chair of anatomy. We have not heard the nature of the learned professor's reply, but, judging from the indifferent prospects of the Westminster School of Medicine, arising as much from its mismanagement as from the mal-administration of the Hospital, we should imagine that he will feel little reluctance in accepting the flattering offer of his fellow-townsmen.

ELECTRICAL CHEMISTRY.—A pupil of Berzelius, who was occupying himself in Sweden with galvanic gilding, having used in his apparatus the skin of a sheep, on which there was some of the wool remaining, perceived that they became partially covered with gold. He followed up the idea, and in time produced an entire golden fleece, preserving the wool in its original and natural state as to texture and flexibility. Living in a village, the young *savant* shewed the wonderful production to his neighbours; but the fanatical and ignorant peasants, regarding him as a practiser of the black art, attacked his laboratory, broke all his utensils to pieces, and compelled him to fly with his fleece to Upsal, where he was received with kindness and consideration by the members of the University, who, by a subscription, not only supplied him with the means of subsistence, but established a new laboratory for him, and aided him in applying his new discovery to the manufacture of woollen cloth. We may, therefore, expect to have shortly cloths of gold, silver, and platina, which will entirely supersede our present gold lace and embroidery.

COMMISSIONERS IN LUNACY.—The Lord Chancellor has, under the authority of the acts 2nd and 3rd William IV., c. 107, and 5th and 6th Victoria, c. 87, appointed Lord Seymour, Lord Ashley, Robert Gordon, Esq., the Right Hon. Robert Vernon Smith, Colonel William Henry Sykes, James Milnes Gaskell, Esq., John Barneby, Esq., Francis Barlow, Esq., J. R. Gowen, Esq., J. W. Mylne, Esq., Bryan Waller Procter, Esq., J. Hancock Hall, Esq., R. Wilfred Skeffington Lutwidge, Esq., Dr. Thomas Turner, Dr. John Bright, Dr. Henry Herbert Southey, Dr. John Robert Hume, Dr. Thomas Waterfield, Dr. Francis Bisset Hawkins, and Dr. James Cowles Prichard, to be the metropolitan commissioners in lunacy for the space of one year, for licensing and visiting all houses within the jurisdiction of the said commissioners, and for carrying into effect the several provisions of the said acts.

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H. S. ROOTS, M.D.
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THOMAS HODGKIN, M.D.
30—4, 1842.

From John C. Taunton, Esq., M.R.C.S., 48, Hatton-garden.
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JOHN C. TAUNTON.
May, 1842.

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COURSE OF LECTURES ON THE THEORY AND PRACTICE OF MEDICINE.

Delivered by C. J. B. WILLIAMS, M.D., F.R.S., Professor of the Practice of Medicine, and of Clinical Medicine, at University College.

GENTLEMEN,—We have next to notice the state of the *blood* as a cause of hæmorrhage—it becomes thin and watery, contains little fibrin, and consequently has little tendency to coagulate—examples of this condition are frequently seen in purpura and scurvy, where a slight wound may produce a very considerable loss of blood; a similar poverty of this fluid has been observed also in petechial and typhus fevers, in which hæmorrhage from the bronchi, gums, intestines, &c., is by no means an uncommon occurrence. Sometimes the hæmorrhagic tendency has prevailed epidemically. Such was the case in this country about six years ago, when small pox and many other diseases were accompanied by extensive bleedings from various surfaces of the body. I saw three patients in whom the hæmorrhage occurred between the muscles of the abdomen; at this period, indeed, it was no very rare thing to find blood discharged without the existence of any other special malady. I may mention to you that hæmorrhage taking place in small pox is almost invariably a *fatal* indication.

The symptoms and effects of hæmorrhage have led to its division into *active* or *sthenic*, in which there is increased circulation of the blood, and into *passive* or *asthenic*, in which no such increased vascular activity is manifested. In active or sthenic hæmorrhage there are usually symptoms of active plethora, either general or local, preceding the effusion, and the functions of the part which is the seat of the mischief are to a greater or less degree affected—thus heat, tension, pain, tingling, &c. are often precursory symptoms—hæmatemesis may be preceded by nausea and vomiting—hæmoptysis by cough and dyspnoea—hæmorrhæa by constipation, and sometimes by increased pulsation in the hypogastric region. The symptoms generally are those referable to the *vascular system*—there is a peculiar jerking or *jarring* of the pulse, as though the heart was acting with spasmodic strength, but still the vessels were relaxed and not completely filled—the arterial action is not uniform in consequence probably of congestion being present in some part of the body. After hæmorrhage there may follow syncope or only weakness;—in a short time, however, *reaction* occurs, and the pulse again assumes the *jarring* character. I think this jarring sensation is much more likely to occur *after* hæmorrhage than before it; but now the vessels appear to be less filled, and the symptoms of heat, &c., are usually absent. If the hæmorrhage is inconsiderable, and not enough to relieve the irritation, the state of *inflammation* is very likely to supervene—this is to be feared when the pulse becomes *fuller* and *harder*, and the heat of the skin is *permanently augmented*—the

same results may follow if the hæmorrhage, is artificially checked before the system has been relieved. The different organs are not unfrequently much benefitted by moderate hæmorrhage; thus headache may be removed by epistaxis; gastritis by hæmatemesis; hepatic congestion by mæna, and tightness of the chest by hæmoptysis. But in other cases the effusion of blood may prove fatal by impeding the functions of the parts, thus in the lungs it may give rise to suffocation, and in the brain to apoplexy.

The *treatment* of hæmorrhage must be guided by the state of the vascular apparatus. If there is increased action of the heart transmitted through the whole sanguiferous system the quantity of blood must be diminished—we must make venæsection, and also administer purgatives and other evacuants. Sedatives are frequently of great service in reducing the action of the heart and arteries, the best are digitalis, antimony, and ipecacuanha. We must be very careful to discriminate between the recurrence of the hæmorrhagic molimen and the irritation which accompanies *anæmia*. The best criterion of the latter condition, (viz., *anæmia*) is the production of *faintness* by placing the patient in the *erect* position; the blanched appearance of the face, and the existence of a murmur with the first sound of the heart, also aid in coming to the decision that further bloodletting would be highly dangerous; such a state is to be relieved by the use of opiates which allay the disturbance of the circulation. When the hæmorrhage is excessive, or in a part likely to prove dangerous, as in the lungs, we must have recourse to *styptics*, which operate by constringing the capillaries, and thus arrest the escape of blood—the most effectual of these agents is the *superacetate of lead*, in doses of from one to six grains, combined with a little *opium*, every two or three hours until the desired effect is secured. Dr. A. T. Thomson advises a draught of dilute acetic acid to be given between the doses of the lead. Tannin and gallic acid are strongly recommended by some—the latter is said to be the basis of “Ruspini’s styptic,” a preparation patronized by Sir Benjamin Brodie. Sulphuric acid is often useful, and should be combined with saline purgatives, as sulphate of magnesia. If the hæmorrhage is from a part to which direct application of remedies can be accomplished, such local application should be made, as *cold* in the form of iced water, or little lumps of ice swallowed as in hæmatemesis, or placed in the vagina in cases of uterine hæmorrhage, and some recommend its application to the surface of the chest in hæmoptysis. I would not adopt it myself in a case of hæmoptysis, because I think that pneumonia is very likely to be produced. Oil of turpentine, alum, sulphate of zinc and tincture of sesquichloride of iron, are all useful in certain kinds of hæmorrhage. The *regimen* should be such as is calculated to keep the patient cool and quiet, and the circulation unexcited; it is often of importance to *elevate* the part from which the hæmorrhage has occurred; this regard to position is specially required in uterine hæmorrhage, the recumbent posture must be maintained, and the pelvis should be somewhat raised by a small pillow. The drink should be cold and *scanty*, for if much is taken the vessels become refilled, and the discharge of blood may be caused to return. The *diet* should be *dry* and *sparing*.

The treatment of passive or asthenic hæmorrhage is not the same as of the active form; in the passive there is little or no increased action of the vessels, so that styptics may be employed in the *earliest* stage, whereas in the sthenic hæmorrhage it is necessary to subdue the vascular force by venæsection *before* styptics can be had recourse to with safety and advantage. In the passive kind the mineral acids and even tonics may be used *immediately*. In passive hæmorrhage from the

uterus the tincture of steel is an excellent remedy, and also in passive hæmaturia; it may be given in doses of five to ten minims every three or four hours. In some cases mechanical treatment may be of essential benefit, as plugs to the nostrils and vagina, and *pressure* upon the organs suffering, and upon the *arteries* leading to them, as on the carotids in epistaxis, and the *abdominal aorta* in *uterine* hæmorrhage. After hæmorrhage is arrested we must carefully watch the pulse and other symptoms; if the vascular action has been increased, and the tendency to the hæmorrhagic molimen is still exhibited venæsection should be repeated. *Inflammation* must also be guarded against; the secretions must be particularly attended to; for this purpose, the compound infusion of roses, with sulphate of magnesia and sulphuric acid, seems admirably adapted; it regulates the bowels, and at the same time operates as a tonic and astringent.

The next topic for our consideration is the throwing out of the *watery* parts of the blood, with a certain amount of saline and albuminous matters; this escape may take place on the portions of the body that open to the external surface, as on mucous membranes, or it may take place on the inner surface of serous membranes, or into the intestines of the serous cellular membrane. In the former case, where the discharge is from a mucous surface, it is called a *flux* or *profluvium*; in the latter case, where the escape is into a shut sac it is called *dropsy*, with its numerous modifications. This also may be *sthenic* or *asthenic*, and may be caused by inflammation, congestion, or determination. General fulness of the blood vessels will produce what is termed inflammatory dropsy—this state may be imitated by injecting water into the veins; the same effects may result from immoderate drinking, either of water or alcoholic liquors. The sudden stoppage of the secretions, such as the perspiration, or of continued discharges, as diarrhoea, is followed by dropsy in various parts of the body, and the particular term applied to the dropsy will depend upon the situation in which the fluid is accumulated—this species of dropsy is called idiopathic or acute, if no organic disease can be detected, but many cases are regarded as idiopathic in which disease of the kidney exists, but is overlooked. Another cause of dropsies or fluxes is *congestion* (or local plethora with diminished motion); this fact was illustrated by one of the experiments of Lower; he placed a ligature upon the jugular vein of a dog, and expected that apoplexy would be the consequence, but instead of this he found *dropsy* of the cellular tissue of the head and face ensue. He also tied the inferior vena cava, and thus produced serous effusion into the integuments of the lower extremities. Disease may also give rise to dropsy in a similar way, thus tumours act mechanically by pressing upon a large vein, and may produce œdema. Again the pressure of the gravid uterus frequently causes swelling of the legs, by obstructing the passage through the iliac veins. It is stated that the sinuses of the dura mater have been found obstructed in many cases of hydrocephalus. We may have fluxes also from mechanical impediments to the circulation, thus bronchial flux may result from impeded circulation through the lungs, in connection with tuberculous deposit, or obstructive disease of the left side of the heart. So pyrosis may arise from obstruction resulting from disease of the liver; diarrhoea is often due to a similar cause. Ovarian dropsy seems to be connected with long continued *congestion* of the uterine system, and consequently is prone to occur at the period that the catamenia cease, especially in women who have been married but have not borne children. *Leucorrhœa* also appears to depend occasionally on uterine congestion. Fluxes and dropsies may arise also from *atony* of the vessels; thus, in the

atony that exists after fevers, dropsy is very likely to occur. Also in general cachectic states of the constitution, anasarca is very common, and it appears first in the inferior parts of the body, in accordance with the rules of gravitation. Effusion, as a result of atony, is constantly seen in the last stages of many chronic maladies.

Determination of blood is a frequent cause of fluxes, as in the bronchial, gastric and intestinal vessels. Bronchorrhœa and coryza often occur from contact with stimulating vapours, which induce determination; this principle of irritation is applicable to many of our remedies, such as diuretics and purgatives, which act by determining an increased flow of blood to the vessels of the kidneys and intestines. Before menstruation is properly established leucorrhœa is not at all a rare affection: it is also common at the time when menses disappear. Hydrocephalus seems to arise from determination much more frequently than from inflammation or congestion. Hydrocele and ascites are likewise due to a similar origin. As dropsies and fluxes may arise from the same causes, so also they may be vicarious of each other, thus hydrothorax has been removed by bronchorrhœa; ascites by diarrhœa; hydrocele by an attack of cholera; and various kinds of dropsy have been relieved by powerful diuretics. Besides congestion, determination, &c., there must be something to ensure the occurrence of a dropsy or flux, for the fulness of vessels, and also increased activity of the circulation may and do exist in numberless instances, without being followed or accompanied by any discharge of serous fluid. Why should dropsy arise in one subject and hæmorrhage in another? Dropsy in itself is, to a certain extent, a disease, and requires something peculiar for its production; this peculiarity may be either in the blood vessels or the blood itself; there is frequently a relaxed condition of the vessels of a tissue, so that a thin fluid would have no great difficulty in transuding. Again we know that the circulating organs are adapted to fluid of a certain *spissitude*, and if the blood has become poor and watery it will be transmitted with great irregularity and the watery constituents may escape, and thus the natural secreting powers of the glands become materially affected; the urine is specially liable to be disordered; sometimes it is tinged with blood, sometimes it is albuminous, and sometimes changed in various other particulars. The poor and watery state of the blood often arises from defective *excretions*; also from excessive venesections, unwholesome food, and the like. As a general rule we may say that the *fluxes* are connected with *laxity of fibre*, and that *dropsy* is occasioned chiefly by a *thin state of the blood*. We may expect, therefore, to find fluxes most common in persons of leucophlegmatic habits: it is not at all necessary that the flux itself should consist of an *unnatural* secretion, for the perspiration or urine, if in great excess, would constitute a flux. When relaxation is considerable, and has continued long, different parts of the system may be affected; in other cases individual organs are the exclusive seats. Where the pulmonary mucous membrane has been subject to inflammation or long existing congestion, an habitual flux from its surface may be established, and the functions of the lungs thereby become very seriously impaired, constituting one of the varieties of asthma. A similar flux from the stomach is called pyrosis, and from the intestines, as you must well know, diarrhœa. Another variety of flux is gleet, and all these are frequently the followers of inflammations. If any part of the system has been once the seat of a regular flux, such part will be very prone to the recurrence of the discharge, if any violent or sudden effects should be produced upon the general economy, because we may suppose the vessels of that particular portion to be in a *weakened* condition. If a flux has existed for a great length of time it takes, as it were, the place of some of the regular excrement agents, as the skin or kidneys, or of both skin and kidneys; so that their functions become *diminished*, the superfluous parts of the fluids being removed by the seat of the *abnormal* secretion.

Old persons are especially liable to these conditions, because the vascular apparatus has be-

come rigid and the excreting organs have become weakened.

I may mention that the weather is supposed to exercise some influence in the production of fluxes; viz., that they are most apt to arise when the atmosphere is *moist*—such a state having a tendency to cause relaxation of the fibres, and to diminish the activity of eutaneous exhalation.

The *treatment* of fluxes will depend greatly upon the state of the heart and vessels. If there is a tendency to inflammation or determination the flux is very likely to relieve it, and should not be suddenly checked, or severe inflammation may be excited, or internal dropsy be produced. The chief object is to draw off the secretion to some part where it can do no injury, as to the skin and kidneys; for this purpose *diuretics* and *diaphoretics* must be given. If inflammation should continue, bleeding may be cautiously tried—blisters are preferable. If the flux occurs without tendency to inflammation and arises from *weakness and relaxation of the vessels*, the indication is to stop it by removing the relaxation, and to improve the *tone* of the system; astringents and tonics are the obvious remedies. In bronchial flux you may give the superacetate of lead, and also in diarrhœa; the lead may be combined with opium. The sulphates of copper and zinc are frequently of service. The *vegetable* astringents have not much power unless applied to the surface, as in diarrhœa, &c.: the best of these are logwood, catechu, kino, and nutgalls—the latter substance may be administered in doses of five grains, either by the stomach or in injections. *Tonics* are more effectual than mere astringents, because the influence of the former is more permanent; quinine, bark, steel, and sulphuric acid are among the chief; it is advisable to accompany their use with derivatives, to draw the blood from the weaker vessels. The balsams of Copaiba, Tolu, and Benzoin seem to have a remarkable power in diminishing secretions from mucous surfaces. The *diet* should be mild, dry, and nourishing. The skin should be kept warm by appropriate clothing. Moderate exercise and the occasional use of the warm bath may be decidedly beneficial.

COURSE OF CLINICAL LECTURES ON PNEUMONIA.

Delivered at the Hospital La Charité, by Professor CHOMEL.

LECTURE XXIV.

Pneumonia of Infants.

A. Physical Signs.—In infants, from two to five years, pneumonia ordinarily commences by bronchitis; hence the *sonorous and sibilant râles*, which belong essentially to this latter affection, acquire at this age a degree of importance as being symptomatic of an impending pneumonia. Whilst the *mucous râle* in the adult indicates only a simple affection of the bronchi, in young children it becomes of greater importance. In them it almost invariably accompanies pneumonia; it frequently remains a long time, and coexists with bronchial respiration; at other times it precedes it. The *sub-crepitant râle* is also of great importance in the diagnosis of pneumonia in children. It frequently precedes bronchial respiration, occurring in the same points in which this latter symptom afterwards shows itself. Its duration is short, being from three to four days at most, when preceding bronchial respiration; it continues, however, much longer when succeeding the latter symptom, indicating in the first instance the rapidity with which hepatization occurs, and in the second, the slowness with which resolution takes place in the pneumonia of early life.

Crepitant Râle.—Some authors, as MM. Gerhard and Ruffz, have denied the existence of this râle in children from two to five years; but MM. Rilliet and Barthez speak positively of its presence in nine of their patients, and carefully describe it as an *excessively fine crepitant râle similar to that of the adult*. In all but three cases, this râle was mixed with bronchial respiration. In more aged children, all authors acknowledge the existence of this phenomenon. From what has been stated, we may, however, see that this symptom is of less importance than the sub-crepitant râle, which, on the

contrary, exists in the great majority of cases. If we compare the various râles attending the pneumonia of children with those observed in the adult, we shall see that their transformations are much more numerous in children; that their progress is also less regular, and their duration shorter; we must also note the influence of position on their production, inasmuch as in some situations they may become totally suppressed.

Bronchial Respiration.—Of all the alterations of the respiratory bruit, bronchial respiration deserves the greatest attention, since, according to the observations of MM. Rilliet and Barthez, it existed in two-thirds of the affected cases; and when it was wanting, either the lesion was very limited, or else auscultation had not been properly performed. In some cases the bronchial respiration was heard only during expiration, inspiration remaining pure, or else being attended with various other râles. It will be necessary not to confound bronchial respiration with the *puerile* or *exaggerated* respiration, natural to infancy; the first being heard during inspiration, but especially during expiration; whilst the second is heard during inspiration only.

Bronchophony accompanies bronchial respiration in the child as well as in the adult; but it is more difficult of discovery, inasmuch as we cannot always engage young children to speak when we wish.

Percussion.—This mode of exploration can only be useful where one is previously familiarized with the normal sonorousness of the thorax in children. In them, the thorax is naturally very sonorous; dullness is, therefore, most usually but relative, it is rarely absolute; we must also remember that the different points of the thorax are unequally sonorous, the inferior and posterior region being perhaps more sonorous than the rest. The difficulty will also be much greater when hepatization has taken place in both lungs; we can then merely judge by the sound portion. Moreover, percussion furnishes no guide in the simple lobular or *mamelated* pneumonia; it is of use only in extended lobular pneumonia, or in primitive pneumonia, affecting one or more lobes. Lastly, the cries of the infant will also frequently render nugatory the results which are so easily obtained in the adult. The *application of the hand flat*, upon the chest is, according to M. Hommann, of considerable utility. The vibration of the thoracic parietes, when the child cries, is always, he states, much more marked on the diseased than on the sound side.

B. Functional Signs.—**Dyspnœa.**—In a series of cases noted by MM. Rilliet and Barthez, the inspirations varied from 30 to 80 in children from 2 to 5 years, and from 24 to 68 in those from 6 to 15 years of age. In half the cases they presented no peculiarity; but in the others they were anxious, deep, and raised the thoracic parietes; at other times they were irregular, unequal, and jerking. In some cases, while the inspirations were normal, expiration was difficult and painful. At the invasion of the disease, the number of pulsations and of inspirations increased rapidly and in similar proportions; while in the more advanced stage, this relation was frequently wanting, and sometimes even assumed an inverse direction. Again, in primitive pneumonia, especially when free from complication with other acute diseases, the acceleration of the pulse, and that of the respiratory movements, was generally in direct proportion with the intensity and extent of the inflammation; but when the pneumonia co-existed with some acute disease, measles in particular, this relation sometimes ceased; and whilst the inflammation of the lung remained very limited, the pulse and respiration acquired extreme frequency. *Cough* existed in almost all instances; unfrequent in the greater number, it was almost always dry. The epoch of its appearance, however, deserves notice. In the adult, the commencement of the pneumonia was marked by the development of fever, and the appearance of cough; but in the child, the cough frequently preceded by several days the development of the pneumonia. In children, from two to five years, *expectoration* was almost always wanting. When it did exist, it was sero-purulent, or sero-mucous, and, in one case, sero-mucous, tinged with blood. In patients, on the contrary, between six and fifteen years of age, expectoration was

almost constantly present; five times the sputa were streaked with blood, and in two cases they were of a rusty colour. *Decubitus* offers no guide in infancy.

c. General Symptoms. It is almost impossible to ascertain the existence of *sliveriag* in young children; from the invasion of pneumonia the heat of the skin becomes sensibly elevated, frequently even excessive, but it is hardly ever accompanied by moisture or sweat. The pulse is rarely below 120 in infants, and usually varies from 120 to 140 or 150. In children, from six to fifteen years, it very seldom reaches this number, but generally ranges about 120. At first, full and regular, it becomes extremely small one or two days before death; this smallness, however, does not occur when the disease terminates favourably. The digestive tube was deranged in three-fourths of the cases between two and five years; a more or less abundant diarrhoea was the prevailing symptom. When the inflammation was very acute, loss of appetite was constantly observed, and the thirst was greater than in the adult. Dilatation of the nostrils, immediately preceding inspiration, was noticed in almost all the children affected; it was generally so much more marked as the affection was more grave or more acute. Sometimes the cheeks were pale, and sometimes coloured; in many instances, the commencement of the affection was announced by a profound and characteristic alteration, followed by rapid emaciation. Disturbances of the nervous system were noticed in more than two-thirds of the affected children between two and five years, and in half of the cases occurring between six and fifteen. Anxiety and extreme agitation existed, especially at the commencement, but rarely continued throughout the course of the disease; at other times a remarkable depression and drowsiness were noticed, sometimes even delirium, in children from six to fifteen years of age. Head-ache cannot be ascertained in most young children; it is, however, frequently observed in those more aged.

D. Pneumonia of Infants, considered with reference to its Extent, its Disposition, and its Degree.—If we examine the various symptoms belonging to lobular pneumonia, a form almost peculiar to this age, we shall find that it is never met with in a perfectly simple state, but is always combined with bronchitis; the character of the symptoms depending on the predominance of either affection. In general, the crepitant r  le is rarely met with; in the greater number of cases it is the sub-crepitant or mucous r  le which prevails, at the same time that the sonorousness remains natural. If the inflamed portions are superficial, auscultation discovers a fine and dry r  le in the corresponding points, surrounded by a humid r  le. MM. Rilliet and Barthez have distinguished a prolonged respiratory bruit, or a very harsh respiration, attended with a more or less clear r  le, in those points where a number of the inflamed lobules were collected together. These various symptoms are more readily distinguishable on a level with the upper or middle part of the lung than near its base; since, in this latter region, the humid r  les are much more abundant and more constant, thus masking the symptoms characteristic of the parenchymatous inflammation. The patient should also be examined several times in the day; for at some moments the symptoms of the bronchitis are less manifest than at others.

Generalized Lobular Pneumonia.—Here we find the mucous or sub-crepitant r  le, and the respiration, or at least the expiration, bronchial, with dullness on percussion.

Pneumonia affecting one or more Lobes.—The symptoms are the same as in the adult, viz., bronchial respiration, bronchophony, and dullness with the crepitant or sub-crepitant r  le, but with this difference that the humid r  les are much more marked than in the adult.

Carnification.—When this lesion is of but little extent, it is manifested by no marked symptom; the mucous or sub-crepitant r  le, and diminished sonorousness, are the only known phenomena.

The symptoms characterizing the three stages of pneumonia in the child, cannot be established in a positive manner. The crepitant r  le, the cha-

racteristic sign of the first stage, is but very rarely heard. As to the second and third stages, the mucous r  le, which, in the adult, acquires value, as indicating the period when the purulent matter has ceased to be concrete and commences to soften, has much less importance in the infant, being at this age of great frequency.

E. Forms of Pneumonia; Progress; &c.—After lengthened researches into the nature of this disease, MM. Rilliet and Barthez have arrived at the following conclusions:—1. That the form of the disease depends on the cause giving it birth.—2. That the progress which it follows, is in relation with that of the affection in the course of which it manifests itself. Thus, pneumonia supervening in the course of a disease of long-standing, assumes the aspect peculiar to chronic maladies; whilst that, on the contrary, which occurs in the midst of good health, or complicates some acute affection, usually clothes itself under the acute form. Hence they have adopted the two following divisions:—

1. *Simple lobular pneumonia, slowly generalized, or pneumonia affecting one or more lobes, and arising in the course of some chronic affection.*

2. *Simple lobular pneumonia, rapidly generalized, or pneumonia affecting one or more lobes; and arising either in the midst of good health, or as a complication of some acute disease, and assuming the acute form.*

1. The first kind is peculiar to very young children. It usually supervenes in the course of chronic enteritis, so frequent at this age, and sometimes after exanthematous fevers, but then a long time after the eruption has disappeared. In this form, the cough is rare, sometimes absent; there is no thoracic pain; expectoration wanting; the skin pallid and cold; the face and extremities oedematous. Reaction, however, usually takes place when the disease becomes generalized; the pulse and respiration are accelerated, and the skin becomes hot. In this form, the disease would often remain latent, without the aid of auscultation. Notwithstanding the diarrhoea, which is generally colliquative, the appetite is often unimpaired, and the thirst not augmented; the skin is sometimes covered with furunculi, or ecchymoses; ulcerations occur upon the parts upon which the body is resting, or after the application of counter-irritants; emaciation takes place, and the infant sinks in the last stage of marasmus. The progress of this form is generally slow and uncertain.

2. Simple lobular pneumonias, rapidly generalized, supervening in the course of some acute disease, and pneumonia affecting one or more lobes, arising under similar circumstances, or in the midst of good health, and assuming the acute form, follow a similar progress in children from two to four years; they, however, present some points of difference, one from another, in those between the ages of five and fifteen. The pneumonia of the first offers two well-marked stages, the catarrhal and the inflammatory. The catarrhal stage is of variable duration, but it is always discernible. Its symptoms are cough, generally slight, sonorous or sibilant r  le, mucous rhonchus, &c., without acceleration of the pulse, or of the respiration; the appetite is preserved, and the child keeps up. After a variable time, there suddenly supervenes a rapid acceleration of the pulse, and of the respiration (marking the passage to the second stage); the skin is burning; the alae of the nose widely dilated; the face expressive of anxiety; agitation, sometimes extreme, is, in other cases, replaced by drowsiness and extreme prostration; auscultation, practiced at the commencement, discovers an obscurity of the respiratory bruit, or else the sub-crepitant r  le, without appreciable dullness; this r  le continues for a variable time; there then supervenes bronchial respiration, at first heard during expiration only, but afterwards heard during both expiration and inspiration, and accompanied by dullness; the general symptoms present great intensity during the progression of the inflammation. Lastly—the pulsations and inspirations become irregular, the pulse extremely small, the face purple, the extremities cold; the state of oppression is replaced by anxiety; the cough ceases; the child is affected with prolonged yawnings; the pulse becomes imperceptible, and

death quickly ensues. The progress of hepatization is sometimes so rapid, that death is produced in two or three days. When the disease terminates by resolution, the sub-crepitant r  le, which had given place to bronchial respiration, commences to reappear, and shortly permits our hearing the respiratory murmur; the general symptoms diminish in the same proportion. Resolution usually commences from the seventh to the ninth day, but the last traces of the r  le may be perceived till the third week. In children from 5 to 15, pneumonia presents some important differences in its mode of progression; it may arise under two circumstances—in the course of some other affection, or else in the midst of good health. In the first case, if the disease which it complicates be a catarrhal affection, we find up to a certain point the two stages of which we have spoken in infants. If the pre-existing disease be an affection not catarrhal (typhoid fever, variola, &c.) the pneumonia becomes remarkable for its insidious progress; the cough is very slight; pain in the chest and expectoration are wanting; and as the pulmonary inflammation is developed in the course of a febrile disease, one can scarcely ascertain any acceleration of the pulse or of the respiration. But the great alteration of the features, noted especially by MM. Rilliet and Barthez, may give some notice of the invasion of the disease. The open form of pneumonia does not present any appreciable difference from that of the adult. According to some authors, its mean duration is about fourteen days.

F. Differential Diagnosis of the Pneumonia of Children.—The signs characteristic of pleurisy, with effusion, are nearly similar to those presented by the adult, and will not, therefore, require any further notice; I shall simply remark that the vomiting, which almost always attends the commencement of serous inflammations in children, will assist in clearing the diagnosis. Pneumonia in infants is frequently accompanied by cerebral symptoms—as delirium, convulsions, or coma, phenomena which might deceive the practitioner and misdirect his attention from the lungs. But in these cases, besides the resources furnished by percussion and auscultation, the movements of respiration and the pulse will powerfully aid us in ascertaining the nature of the disease; in fact, in cerebral affections the respiration is almost always slow, unequal, and irregular, and the pulse rarely presents that frequency observed in pneumonia. A very important point of diagnosis is that relating to tuberculous affections of the lung. Supposing that we meet a child with a hot skin, intense fever, dulness and bronchial respiration under one of the clavicles—whether are we to conclude that these symptoms belong to pneumonia or to a tuberculous affection? Inflammation rarely attacking the summit of the lung at this age, except in tuberculous individuals, we should *a priori* be inclined to think, on discovering the signs of inflammation in this region, that some tuberculous affection was complicated with the pneumonia. We should also take into consideration the intensity of the febrile movement, and especially the progress of the disease. If, for instance, the stethoscopic signs continue, notwithstanding the diminution of the general symptoms, it is probable that this persistence is owing to a tuberculous affection. The difficulty of diagnosis would be still greater, should tubercles, surrounded by pneumonia, be seated at the posterior part of the lung, in which case we should be deprived of the valuable resource presented by a comparative examination of the usual seat of tubercles in this or that region of the organ. A case still more embarrassing is that where the tubercles do not occupy a limited space, but are spread throughout the pulmonary parenchyma, as in the acute phthisis so frequent in children. If in this case bronchitis becomes combined with the tubercular disease, we hear a mucous or sub-crepitant r  le, as well as harshness of the respiratory murmur; symptoms closely resembling those of pneumonia. The difficulty will be still greater, should these symptoms follow an attack of measles, a disease which we know frequently calls phthisis, as well as pneumonia, into existence. We must then take into consideration the previous history of the case, especially the hereditary predisposition

to tubercles, as well as the progress and duration of the affection. There is, lastly, another difficulty which may arise from the form of the pneumonia. We have seen that in certain cases, at an advanced period, the pneumonia is attended by cough, colliquative diarrhoea, extreme emaciation, pallor of the face, and infiltration of the extremities—phenomena equally characteristic of advanced tubercular phthisis. But, according to MM. Rillet and Barthez, the signs afforded by the stethoscope will generally be able to guide us without much difficulty in our diagnosis. The progress of the disease will also present some points of difference; thus, most frequently the diarrhoea precedes the cough in pneumonia—whilst, in the tuberculous affection, it shows itself at a much more advanced period. Finally, we may remark that this form of pneumonia is frequently met with in children from 2 to 3 years, while pulmonary phthisis is rare at this age.

ON ORIGINAL DISLOCATION OF THE FEMUR.

By J. NOTTINGHAM, Esq., Surgeon.

(Continued from page 373.)

PERSONS affected with original luxation of the hip, do not complain of any pain in the part, nor in the knees, but complain of fatigue and numbness whenever the lower limbs have been too much exercised: in such cases there is no swelling round the hip-joint; the projection of the great trochanters, and the increased volume of the fleshy mass which surrounds the neck of the thigh-bone, have none of the characters of swelling: they are the effect of the ascension of the head of the bone upon the dorsum of the ilium, and of the motions which have caused the elevation of the muscles, with their attachments, towards the crista of the ilium: we find no abscess, no fistula in the neighbourhood of the hip-joint, nor do we find any cicatrix, and, consequently, nothing which could lead one to suspect the previous existence of abscess or fistula, the common attendants of diseases of the hip-joint, which has ended in spontaneous luxation. Lastly, the two hips, or the one alone affected, present always the same alterations of form—a fact so unlike what is met with in ordinary hip-disease, that it may almost be regarded as a peculiar characteristic of this malformation; in other words—of the congenital affection of the joint.

These facts acquire additional importance by the history of individuals affected with original luxation of the hip: they usually say that they have never suffered from pain in the joint, nor in the knee; they do not complain of inability to move the hip-joint, nor of unnatural lengthening of the lower limbs, tumefaction of the hip or femur, of sudden shortening of the limb, after previous lengthening, nor, in short, of any symptom of the painful and cruel malady which terminates commonly in spontaneous dislocation of the hip-joint.

The history of such patients shews also in a positive manner, the early signs, the progress, the development, and the effects, of congenital luxation of the femur. If called sufficiently early to see children thus affected, we find them to have had the symptoms of this luxation from the very time of birth, such as increased size of the hips, projection of the trochanters, obliquity of the thigh-bones, &c.; but as it commonly happens that these malformations, and the infirmities which result from them, only attract the attention of parents at the time when children are beginning to walk, it is only at this period, in the majority of cases, that we are called upon to investigate their nature. At this time, children so affected can scarcely support themselves on their feet, and standing, walking, or running, are all difficult; indeed, it sometimes happens that the parents, careless and inattentive, imagine that their children are only a little slow in learning to walk, and do not discover that they suffer from any serious affection before the end of three or four years, or at a time when the defects and imperfections in the form and action of the parts have become so remarkable, that they could not reasonably be any longer attributed to a mere delay in the development of the parts or of their normal actions.

The disease becomes especially apparent, as the pelvis increases in breadth, and as children begin to make longer and more fatiguing exertions; it is then that the balancing of the upper parts of the body upon the pelvis, that the inclination forward, that the bendings of the trunk, the projection of the belly, the circular (or an arc of circle) movements of the sides of the pelvis, the want of fixity in the heads of the thigh-bones, and their alternate movements of elevation and depression on the dorsum of the ilium, begin to render themselves more manifest; but the cause, as well as the nature of the complaint, remaining unknown, even to a majority of the profession. Some attribute it to dislocation from external injury, which may have happened during lactation, as by a fall from the cradle or from the arms of a nurse; or from the effect of traction exerted on the lower extremities, as when a child is raised by seizing hold of the leg or thigh. Others suppose the complaint to be of a scrofulous nature, which, during pregnancy, or after birth, has caused ulceration of the borders of the cotyloid cavity, or of the head of the femur, and, by consequence, the displacement of the latter. It must be allowed that the lymphatic constitution, and rickety aspect of these patients, give apparent weight to the latter opinion; and if we have adopted a different view, it is because we have met with the malformation in children with a constitution the very opposite of that which has been alluded to, at the time even of their birth, and when no other trace of disease could be observed,—and, lastly, it is because we have had opportunities of dissecting the parts affected, and have found them with such form and organization as excluded the idea either of actual or pre-existing disease.

At the period when the distinctive characters of the sexes begin to shew themselves plainly, the growth of the pelvis, more rapid and more remarkable in the female than in the male, renders the effects of this malformation more apparent in girls; but when the pelvis acquires its greatest dimensions, and the upper parts of the body their extreme weight, the effects of original luxation increase rapidly, and in such manner as to produce a fear that hip-joint disease is coming on. At this time, the most superficial observation cannot miss the complaint, and doubts respecting its nature, if such have existed, are removed.

This increase is marked by the inclination forwards of the upper part of the body, which becomes from day to day more evident, by the bending of the loins and the projection of the belly, which go on increasing, by the continual movement of ascension of the great trochanters, by the balancing of the upper parts of the body, and the lateral motions of the pelvis, which are from day to day more remarkable; and, if the expression may be allowed, by the disarticulation of the thigh-bones every time they have to support the weight of the body.

The increase of weight of the upper parts of the body, and of the extent of the transverse diameter of the pelvis, give rise to this increase of symptoms. The upper parts of the frame bearing with greater weight upon an articulation, without a proper cavity, fatigue the ligaments and muscles, and tend to drive the head of the femur towards the crista of the ilium; and such, indeed, is the extent of this movement of ascension, that we have met with cases where the trochanters, and the head of the thigh-bones, mounted so far on the dorsum of the ilium, in the course of a few years, as nearly to touch the crista of the bone. The breadth of the pelvis, in females especially, giving a greater interval between the heads of the thigh-bones above, obliges the shaft of these bones to take a line of greater obliquity, so as to permit of their holding a proper position towards the knee, by which the bad effects of want of solidity in the hip-joint are rendered more remarkable. Thus, we meet with those who, as young girls, were able to walk, run, and dance, becoming at a more advanced age incapable of any violent exercise: and this, at first, but a difficulty, becomes afterwards an absolute impossibility, in persons of great *embonpoint*, in those who suffer from dropsy, and especially in young females during pregnancy.

It is to be remarked, that the phenomena which

present themselves on the exterior of the pelvis, in no way influence the development of the pelvic cavity; and that before the time of puberty, as well as during and after that period, the pelvis acquires those dimensions which are most favourable to the exercise of the functions of the viscera which it contains; and that it is as well suited for the reception, conservation, and transmission of the product of fecundation, as in females of the most perfect organization.

But what, then, is the cause of this displacement?—Might it be the product of disease attacking the fetus in utero, from which recovery has taken place before birth? May it be the result of some effort or violence, which has caused the head of the femur to leave the cotyloid cavity, and may this cavity have become obliterated without disease, merely because it would have had no function to perform, and hence must have remained useless? May nature have omitted to form a cavity for the reception of the head of the femur? or may not this cavity, resulting from the approximation and union of the three pieces, of which the os innominatum is composed, have remained imperfect in consequence of some obstacle which has interfered with the development of the bones?—a notion which is in accordance with the opinion of M. Breschet? Without attempting to solve any of these questions, we may offer a few short remarks.

The researches of pathological anatomists, have demonstrated that the fetus, during the period of utero-gestation, is subject to many diseases which may take their course and terminate by cure or in death, before the time of birth. Hence, it seems that disease, such as that which causes spontaneous luxation of the femur, might have produced the displacement of which we speak. Nevertheless, many circumstances are opposed to such an explanation—for, in the first place, all the individuals in whom this displacement has been observed, were in sound and good condition at the time of birth, which would lead one to suppose that they could not have suffered from a disease of such a serious nature as that which is followed by spontaneous dislocation of the femur; besides which there has not been observed at the time of birth, or after, any swelling, abscess, fistula, or pains, such as generally accompany and follow this kind of disease.

Is it not more probable that this displacement is rather the result of violence, which has driven the head of the femur from the cavity of the acetabulum? In short, may it not be accidental, and analogous in its nature, if not in its special cause, to those which occur during life, as consequences of falls, sudden abduction, &c.? But with this hypothesis, what can the effort or violence have been, which produced such a displacement? I may be allowed to make one remark on this matter, which may give some probability to such an explanation. This observation is, that the position of the lower extremities of the fetus *in utero*, is such that the thighs are closely bent upon the belly; that the heads of the thigh-bones make continual effort against the posterior and inferior parts of the capsule of the joint; that this continual effort, which produces no effect in well-constituted children, may act otherwise on those whose organization is less resisting, and whose constitution is not equally good. Admitting this fact, we easily see that the lower and back part of the capsule of the joint compelled to yield, and permit the head of the femur to escape, must allow the occurrence of dislocation; after which we may readily understand the nature of the displacement upwards and outwards, by recollecting the fact that the most powerful muscles which surround the upper articulation of the thigh-bone, constantly tend to draw the head of the bone in this direction, as soon as it leaves the cotyloid cavity.

Again, this luxation of the femur, may it not be the effect of some obstacle to the evolution of the os innominatum? M. Breschet thinks, from his own researches, as well as from those of many other modern anatomists, respecting the development of the embryo and the fetus, but especially that of the osseous system—that the points or parts last developed are those where cavities or eminences ought to exist, and more particularly those where many bony pieces are united. And that it

is at those points where bony pieces meet and touch for the purposes of complete union hereafter, that we meet with malformations resulting from defective development. We know that the cotyloid cavity is composed of three pieces, and that the formation of the cavity belongs to a late period of ossification. The viscera contained in the pelvis, and the walls of this cavity too, receiving vascular branches distinct from those supplied to the lower limbs, which may be considered as continuations of the arterial trunk—it might happen, from the effect of circumstances hitherto unknown, that the development of the pelvis might be retarded, and may not have its normal relations to that of the thigh-bones; the latter, in such a state of things, would be carried to the lowest point on the exterior of the ilia, and their heads would, in fact be lodged on the dorsum of these bones.

(To be continued.)

EXTRACTS FROM FOREIGN JOURNALS.

(Translated from the Medicinische Zeitung, for the 'Medical Times')

Upon Wounds of the Heart, especially in their Forensic Relation.—Wounds of the Heart, as is well known, are far from being always immediately followed by death. The wound may be so narrow, that the hæmorrhage only proceeds slowly and by degrees, or it may be contracted by the varied directions of the divided fibres of the heart, it may be kept closed by a plug of coagulated blood or even by the wounding instrument itself, and even in immense hæmorrhage into the cavity of the thorax, life is not immediately extinguished. Cooper relates a case of wound of the heart by a bayonet stab; where the wound extended itself three quarters of an inch deep into the muscular substance of the left ventricle, and not only pierced it, but had cut through a part of the valvula mitralis; yet the wounded man lived 49 hours with little suffering. *A jeweller wounded himself in a fit of melancholy, in the left side of the breast, between the 5th and 6th ribs, with a long, thin, and sharp instrument, and died only after 20 days in consequence of the heart being wounded. On dissection there was found not only a great quantity of serous effusion in both cavities of the thorax, and in the strongly distended, thickened, and clearly inflamed Pericardium; but also the wounding instrument itself, in the substance of the heart, which it had pierced through the anterior side of the lower third of the left ventricle, into which it had passed, and pierced through the septum ventriculorum, even standing out one line into the cavity of the right ventricle, without however touching the opposite wall.† Out of many other such cases, where death slowly ensued from wounds of the heart, that lately communicated by Steifansand,‡ is also especially worthy of remark. A journeyman weaver æt 20, received a stab in the breast, from which great hæmorrhage followed; a compressing bandage was applied, and antiphlogistic medicines prescribed; the wound bled no more; it appeared to have nothing doubtful, and to be but merely superficial. The patient was notwithstanding very restless; on the 4th day however a fresh bleeding came on from the patients moving, but it was restrained by a fresh bandage; it now returned more frequently, so that the surgeon became alarmed, and consulted Dr. Steifansand. He found the patient pallid, and pulseless, with cold extremities and difficult respiration. The stroke of the heart was only perceptible to the applied ear, by which

was heard a peculiar short interrupted metallic sound, as when one struck against a glass with the finger nail. The expression of countenance betrayed great commotion of mind. The patient complained of anxiety, he was nevertheless in his full senses. Black blood flowed from the wound, especially on motion, or pressure upon the breast. Steifansand supposed that the arteria mammaria interna was wounded. The condition of the patient would not permit a more accurate examination of the wound, and every operative step was prevented by the probably subsisting extravasation of blood, the chief indication here was to prevent farther hæmorrhage, and to spare the little blood; yet left in the circulation. But the patient could not keep himself quiet, he therefore expired on the 7th day after receiving the wound, even as he was moving himself to change his position. On autopsy the whole right thoracic cavity was found filled with dark fluid blood, about 3lb. The instrument had passed through the cartilage of the 4th rib on the right side, had cut the arteria mammaria interna across, passed through the pericardium into the right auricle of the heart near to its opening into the ventricle. The wound in the Pericardium was rather more than 3 lines long, that in the auricle 2 lines. The lung on this side was completely collapsed, and pressed down from above. The Patient had lived with this wound nearly 8 days, without manifesting until the last day but one any particular affection of the chest, whilst his chief complaint was that he could not sleep: this internal uneasiness appeared to be from pure psychological sources. The immediate cause of death in this case was, according to Steifansand, the hæmorrhage, whilst, as one may conceive, the greater part of the blood had been lost. The right lung also was indeed placed out of function, but this could not, according to Steifansand, have been the cause of death, as when even the substance of the lung is remarkably wasted, life is yet tolerably sustained.

In those cases of penetrating wounds of the heart collected by Olivier,* (54 in number,) in 29 wounds of the right ventricle, death followed, (except in 2 cases,) between the 14th and 28th days from receiving the wound; on the contrary in 12 cases of wounds of the left ventricle, it followed in 3 cases, one after half an hour, another after 49 hours, and the third only on the 10th day, so that one may rightly maintain that in most wounds of the heart, instant death does not follow; especially when in not by any means a few of these cases, death occurred strikingly late.

But indubitable cases may be given of healed heart wounds, even penetrating wounds. Fodéré, Consbruch, Meglin, Sanson, and others, cite cases, where penetrating wounds of the heart had been afterwards found cicatrized. Roose has in his contributions† collected cases of healed heart wounds, these have in later times been still more augmented, so that the doubts raised by Metzger are not to be received. Many well known observations are given of animals whose hearts have been found cicatrized, or even containing the point of the wounding instrument, as appears in Bohn, Plouquet, Haller. In a cow, a needle was found in the heart,‡ it had been swallowed, and worked its way through the œsophagus, and pericardium into the ventricle. In a cock which had been killed, quite sound, a needle was also found, in the substance of the heart.§

According to Albers,* foreign bodies have been very often found in the hearts of domestic animals, which have worked themselves in from wounds; pins, needles, nails, that have penetrated the walls of the ventricles, have been found loosely attached to them, also knitting needles that have gone through the cavities of the heart, and formed obstructions. These bodies are for the most part surrounded with a cellulose, scarcely membranous, covering, through which a fistulous opening arises: seldom only is a suppurative appearance found: should larger foreign bodies be found the heart is always hypertrophic, at the same time without these phenomena being accompanied by violent symptoms.

Such as have made experiments on the woundableness of the heart in animals, observe that the heart is an organ not very liable to wounds. Professor K. J. Jung† opened the ventricle in various animals, with a steel or silver needle 4 inches long, flat at one end, two edged, nearly one line broad, and provided at the other end with a knob. He applied to the heart of the wounded animal at the same time, a galvanic column of 50 pair of plates. The animal bore the puncture of the heart at different times, even often repeated upon him, without any injury remaining. In a dog and rabbit a small coagulum of blood was found upon the recent heart wound, and in a dog and fox which had been killed later, distinct cicatrices of the heart. After the application of the galvanism the dogs and a goat moved about.

The acupuncture of the heart in cholera instituted by Searle, demonstrated not less that small punctured wounds of that organ are by no means mortal, and are capable of being again healed. Here also belongs that case of Peyron. In a young woman of 18, suffering from rheumatism of the heart, complete acupuncture had a happy result, 3 needles were sunk in between the cartilages of the 5th and 6th ribs, two of which with certainty reached the heart, all three however remained inserted without pain to the patient 48 hours after their introduction.‡

Of examples where wounds in the heart in man have healed, are among others the following. In a soldier who had received a wound in the breast, and after six years died of another disease, in which the heart was not affected, Latour found a bullet in the right ventricle, near to the apex, or point of the heart, capsulated, covered in part by the pericardium, and lying in front of the septum ventriculorum.§ Randall communicated the case of a negro boy, who lived 2 months and 6 days after having received a discharge of small shot in the breast. Upon opening the body 5 shot were found in the heart, 3 in the right ventricle, and 2 in the right auricle. The heart was here and there abnormal in consequence, but the greatest abnormality shewed itself in the lungs, which were so inflamed and destroyed, that in them especially was to be sought the source of death. Dupuytren relates the case of a man who was brought into the Hotel Dieu after having received two knife stabs. One of these wounds was in the epigastrium, the other in the region of the heart, vomiting was present but without trace of blood in the vomited matter, but a large quantity of blood flowed from the wound in the chest, which outlet had already much lessened

* Clarus's und Radius's Beitrag zur Practisch Heilkunde, Bd. 1, p. 393.

† Beobachtungen über die Versundbarkeit des Herzens an Thieren in der Oesterreich, Medicin, Wochenschrift, 1841, No. 33.

‡ Frorieps Notizen XIV, 119-124, 1826.

§ Dupuytren a. a., O. S., 515, Histoire philosophique et Med. des causes essentielles et Prochain des Hæmorrhagies, T. I., p. 75.

* Hufelands Journal, 1815, art. 4, p. 125.

† Dupuytren, Vorlesungen über die Verletzungen durch Kriess waffen, A. D., Franz von kalisch, Berlin 1836, p. 517.

‡ Upon heart wounds and extravasation of blood into the cavity of the chest, Casper's Wochenschrift, 1838, No. 15.

* Von Steifansand, a. a., O. S. 236, cited from the Dietion: de Medecin, Tom VIII, art. Plaies du Cœur.

† Bd., I. S., 188.

‡ Otto's seltene Beobachtungen zur Anat. etc., Hefts, Abschnitt, 4.

§ Neurehr in Henkes Ztschr 1825, p. 149.

itself by contraction. The wounded man was pallid, somewhat confused, and in a spasmodic trembling, the pulse regular, but in the lowest degree feeble, the heart pulsated regularly, but scarcely to be perceived. The state of weakness however appeared to be rather the product of nervous affection, than great loss of blood. The symptoms gave no indication that the wound of the breast penetrated; the whole left side of the chest was clear sounding, the respiration regular, and neither cough nor expectoration of blood subsisted. From the abdominal wound came neither firm, fluid, or gaseous matter, nor was any symptom of extravasation into the peritonea cavity present. The wounds were very little painful, and the patient was in other respects in a very tranquil state, and it thus continued with the wounds throughout the whole course of the sickness. But after 2 or 3 days, general febrile symptoms occurred for which bleeding was used, and on the last day vehement congestion of the brain, with loss of recollection, great restlessness, and convulsive muscular movements of the whole left side of the body, after which remained a complete paralysis of the left half of the body, afterwards followed a tetanic paralysis of the muscles of the neck and back, and the patient died 8 days in consequence of nervous sufferings. On autopsy a wound 2 lines long was found in the stomach near to the greater curvature, but the edges touched each other and it was in part already united and closed up by the mucous coat; the stomach itself was not inflamed, and no extravasation existed in the normal peritoneal cavity. The wound in the chest penetrated between the 4th and 5th ribs, on the left side, the intercostal artery under the edge of the 4th rib had been opened, and from which had been poured out about 4 oz. of blood into the left thoracic cavity. In the pericardium was found a penetrating wound $3\frac{1}{2}$ lines long, and one also in the heart itself, in its middle part on the right side of the left ventricle, which had a transverse direction, and in its form resembling a lying D, (\cap) $3\frac{1}{2}$ lines broad, and at least one line high. The external fibres had separated themselves from each other, to the greatest degree, the following, by degrees less, in such manner that the inner ones touched each other, and closed the wound. The pericardium contained perhaps one ounce of blood. In the brain the arachnoidea was found dry; in the middle and internal part of the right hemisphere, a small, yet remarkable impression, and in this place, in the environs of the white, as well also as of the grey substance of the brain, here and there small softenings and a weak injection were present. The medulla oblongata and spinalis shewed no alteration.* "From these, as well as from other observations" said Dupuytren, "we must conclude, that wounds of the heart, when even highly doubtful and dangerous, yet warrant a prospect of healing; how deep soever the wounding instrument may have been thrust in, and in whichever cavity its walls may be wounded."

From these observations it therefore follows that many wounds of the heart certainly become healed, without our receiving any certainty thereof, whilst during life the diagnosis of heart wounds is illusive; for while on the one hand we observe men, in whom the symptoms of heart wounds were present, notwithstanding which they recovered: and on the other hand, the before-mentioned observations of men having had wounds of the heart, which having healed they have died perhaps of some other disease, which dissection afterwards indubitably shewed: in both by comparing them, we are thus brought to the

conclusion, that many more wounds of the heart heal, than we are able to shew by certain experience.

To be able to come to an accurate judgment upon the danger and fatality of wounds of the heart, it will be necessary first to enquire in what manner death is immediately caused by them, and 2ndly, what circumstances are able to remove or prevent the danger, and to bring the wounds to healing.

1st. Can death be caused immediately by hæmorrhage. It is clear, that in a large opening into the heart, the blood flows out irresistably, and where the pericardium is also laid open, it must empty itself into the communicating part of the cavity of the thorax until this is completely filled. Through this, however so large a quantity of blood is lost, that when especially a more or less quantity has emptied itself outwardly before the closure of the wound, one is well entitled to ascribe the death to the hæmorrhage suffered. The circumstance here indeed comes into consideration, that the outpoured blood exercises pressure upon the lungs and heart, and is thereby in a condition to hinder the respiration and circulation, but it is not probable, at least not always to be assumed that this latter circumstance occasions death, for on one side we frequently see, also in other diseases that the whole lung of one side is placed out of function, and yet life is at the same time tolerably continued, and on the other side it has been truly observed, that in heart wounds, the entire side of the chest has been filled with blood, and notwithstanding, no difficulty of breathing, no sense of suffocation was present, as was observed in the case of Steifensand. It also deserves all consideration, that the feeling of anxiety and oppression may not really always arise from the pouring out of blood, but may have its origin from, or in, the psychological relations of the wounded organs, a circumstance to which Steifensand justly drew attention. The feelings of anxiety and horror, as is well known, reside especially in the heart, or at least are especially reflected on this organ. No wonder then that when it is wounded these sensations come on in a peculiarly lively manner, as this even is the case in other diseases of the heart.

Nevertheless in cases where the patients have lost much blood, and after death a large extravasation is found in the cavity of the chest, we must ascribe the consequent death to the loss of blood, and especially then, when no great difficulty of breathing had been present, and more predisposed the hazard of the hæmorrhage. On the contrary we must not mistake the share which the pressure of the outpoured blood had in causing death, in those cases, when actually besides the feeling of anxiety, a considerable hindrance of respiration, amounting nearly to suffocation, had taken place. That bare feeling of anxiety, be it ever so great, might yet in such cases well distinguish itself from real fits of suffocation,—the apnoe from the dyspnoe,—and Steifensand manifestly went too far, when he made it a matter of reprobation to the great Dupuytren in the treatment of the Duke of Berry, where the right ventricle was pierced through, and by which the exit of blood into the thoracic cavity was clearly manifest,—that he—until death, which followed seven hours after the wound, opened it every two hours, that he might prevent suffocation, and thereby allowed a loss of blood. Might even the loss of blood and the danger therefrom be increased, whilst the emptied cavity of the chest immediately became filled again by the new flow of blood, allowing also that the new flow of blood from the heart could not

sooner cease, than until the thoracic cavity corresponding to the wound had become filled up, by which the farther outpouring would be prevented by that blood itself, there was here present the highest danger of suffocation. Dupuytren could not wait for the closing of the heart wound, the unavoidable death that must come from delay, drove him to act, and what under these circumstances should he do otherwise, than to prevent instantaneous suffocation, as to let out any blood from the chest, might be pernicious in this as well as in other respects? But that there was here present actual, and not merely apparent danger of suffocation, we might readily believe on the word of the celebrated Dupuytren. The case observed by Steifensand shews truly that the cavity of either side of the thorax may be quite filled with blood, without suffocation immediately following, but he does not shew that this must always be the case. It will cause an example of great difference, whether the blood is poured into the right or left half of the thorax, and one more circumstance may yet be allowed consideration, that on one side suffocation may be produced, while on the other it may be prevented.

2nd, Death may depend upon the pressure, which the extravasated blood in the pericardium exercises upon the heart, whilst its functions are thereby paralysed. These causes of death we have adopted in those cases, where the loss of blood was not marked, and could not have caused death. Against this one may freely be allowed to object, that in wounds of the heart, the pericardium is immediately and necessarily opened with it, the wound of which stands directly opposite that of the heart, and is even greater and more gaping than it, the pressure upon the heart will not sooner commence than till the blood can no more flow into the cavity of the chest, and till this is filled, but then death might sooner ensue from great hæmorrhage, in a fit of fainting, than from the back working pressure of blood upon the heart.* That this objection has its validity in many cases, is not to be denied, and it may even yet be shewn, that death may more frequently depend entirely on the loss of blood suffered, but it does not suit every case; for the circumstances also should be here again considered, which hinder the exit of blood from the pericardium, whilst that from the heart continues, *e. g.* the situation of the wound, the position of the wounded person, other organs or foreign bodies that place themselves before the wound in the pericardium and close its opening. In the case of the Bauer, related by Cathcart Lens,† over whose breast a loaded waggon passed, I might oppose the judgment of this writer to that of Steifensand, for the waggon had gone over him, and he had been lifted up, the wounded man was sensible only of some pain and weakness, and was again able to sit sideways on the waggon, and ride forward, yet another hour in a bending posture. As he came near to a hospital, he thought it right to make use of the opportunity of being examined; he went in, laid himself down upon a bed, and suddenly expired as he was turning himself round. It was found by the section, that a part of the 5th rib had been forced into the right auricle, and yet filled up the wound in the pericardium, but was withdrawn out of the heart, which perhaps, adds Cathcart Lens, explained the sudden occurrence of death. I must confess that I thus explain the sudden death. Steifensand, however, is of another opinion, and

* Steifensand a. a. O.S. 235.

† Forriep's Notizen Bd. II. No. 20. Steifensand a. a. O.S. 236.

* Dupuytren a. a., O. p., 518.

thought, the opinion may be ventured, that the part of the rib forced into the heart came out by the motion just immediately preceeding death, from which then, by the hæmorrhage into the pericardium, death immediately ensued. That death occurs during any motion the patient attempts to make, is frequently the case, and any such effort of the vital powers barely to the carrying on any external muscular motion in affections of the heart, might be very dangerous, as the propensity to fainting is here especially great, and the disturbed and weakened circulation standing no more in proportion to the vital powers, and the necessities of life of the remaining organism, must of necessity have in consequence a prejudicial influence on the central nervous system, so that the immediate cause of sudden death, must indeed be again sought in these powers of life. Thus we speak figuratively of any man who has been overcome by any overwhelming passion, that his heart is broken; therefore, when I willingly concede, that in such weakened condition, any trifling bodily motion is already in a state to make a deadly impression on the nervous system, yet one cannot so easily in the ease just mentioned accept such a cause of death. The Bauer did not complain of any feeling of anxiety at all. When he was lifted up he complained only of pain and weakness. He could not even have thought his situation dangerous, for he would only use the good opportunity that offered, that he might have himself examined. There could not in fine be even any considerable hæmorrhage present, for the rib forced into the heart, at least in the beginning, whilst it continued in the pericardium, filled up the wound. And now the Bauer suddenly died, as he turned himself round, and after death the rib was found drawn out of the heart wound, and the pericardium full of blood. What is then more natural than the opinion, that the retraction of the rib from the wound in the heart, and the then quickly following hæmorrhage into the pericardium brought on the sudden death! Wherefore then should any other cause be sought out there being no traces present, and therefore no means of making the case clear.

The circumstance, mentioned by Steifansand, namely, that death frequently occurs in wounds of the heart, during some motion that the patient attempts to make, is correct, but in my opinion it admits quite another explanation than that given by Steifansand. My view upon it is the following: In the pericardium filled up with more or less thick blood the feeble and exhausted heart seeks to overcome the pressure of this blood, that it may carry on its restless function; it forms itself a path, it works itself by its strokes, in part at least, a continuing and conformable space in the thick fluid, in which it may move itself. Should, now, that space-like relation with the thick fluid be altered by any motion of the body, it labours in an altered position, in other proportions of pressure, so is it often not again able to procure for itself a new space for its motions, and—it stands still. Many might, perhaps, consider this view too mechanical, yet it is not so in principle. It has, indeed, regard to the mechanical pressure of the out-poured fluid, which here even is to be recognised. On the other side it has nevertheless regard even as much to the struggling of the exhausted power of the heart against this pressure, and appears to me at least to explain quite naturally the circumstances stated in the discourse, although also the nervous impression with the whole affection may come into the proposition. The same explanation may also be admitted in pericarditis in that state of suffocating feeling produced by lymphatic and serous effusion,

which occurs when the patient seeks to change his posture.

For the view that the pressure of extravasated blood into the pericardium may cause death, may also be cited the spontaneous rupture of the heart, whereby it is well known death suddenly follows, notwithstanding that hæmorrhage cannot well be the cause of it. Steifensand disputes also here, that death can alone arise from the pressure of the blood upon the heart. However if we are not able to know whether the laceration takes place exactly in the last moments, or that in most cases, for a longer or shorter time, symptoms of diseased affections of the heart, or of the body in general have preceded, the laceration of the substance of the heart, yet at any time any peculiar sufferings, any abnormal quality of the same, or very strong disturbance of the powers of life, may have before occurred. The outflow of blood and the pressure thereby produced on the heart, will always remain the chief cause of death, and that before cited circumstance will be considered as the precursor, as an introductory process. Also it is not probable that the disturbance which the nervous system suffers in laceration of the heart produces the sudden death, as is adopted by some, for in wounds in the heart the nervous system suffers a similar disturbance, and yet seldom only does sudden death occur.

Against the view that in laceration of the heart, sudden death depends upon the pressure of the outpoured blood into the pericardium, the ease of hydrops pericardii cannot in fine be properly brought forward, for here, spite of often so distinct a collection of fluidity in the pericardium, life is notwithstanding capable of long continuance. The secretion occurs only proportionally slow, and even when it occurs quickly, as in acute pericarditis, yet it comes on not so suddenly as in laceration; the heart also is not wounded in this ease, it is therefore better able to withstand the pressure, and the fluid is thinner. In hydrops pericardii the heart obtains time to accustom itself to the pressure, and therefore bears it better; so also in the central organ of the nervous system, in the brain and spinal marrow, a sudden pressure causes death, whilst a gradually increasing, though even much stronger pressure will often be borne without any marked injury. In wounds of the heart the pressure comes on only by degrees, whilst the blood from the likewise opened pericardium, by this rule, is permitted an exit, and thus here also death in most cases does not suddenly follow, and not sooner, than till the debilitated heart can no longer withstand the pressure of the blood more or less collected in the pericardium.

(To be continued.)

ITALIAN.—*Practical remarks on the Blood, drawn in intermittent Fevers.* By M. FACEN.—These observations merely relate to the proportion of serum and of coagulum, to the presence or absence of the buff, and to the colour and density of the fluid. They embrace neither chemical analysis nor microscopical researches. Blood drawn in the commencement of true periodical fever scarcely differs from that in the normal state; and this, whether drawn in the cold, hot or sweating stage, or during the intermission. In general, however, the quantity of the serum is less during the sweating stage. The tendency of the fibrine to coagulate increases in direct ratio with the number of febrile paroxysms; so that after ten or twelve accessions, the inflammatory buff commences to form itself upon the surface of the clot. This buff does not exist in simple gastric fevers, provided the disease has not invaded some parenchymatous viscus or the

arterial system. In the more malignant forms of intermittent fever, also, we are unable to discover the presence of buff, at least in the commencement, however grave and menacing the symptoms may be. The frequent repetition of the febrile paroxysms gives to the fibrine that power of condensation which produces the formation of the buff, which, however, varies in consistence according to the intensity, the duration and the number of the paroxysms. The experience of M. Facen proves that the action of quinine is more certain and more lasting when associated with the employment of antiphlogistics.

On the successful employment of ergot of rye in some kinds of hysteria. By M. NARDO.—M. Nardo commences by admitting that hysteria may depend on various lesions, although most frequently it has its origin in some disease of the generative apparatus. Thence, it radiates towards the brain or towards the stomach, and consequently may be included, according as it has followed this or that progress, under the following divisions, which will also embrace those hysterical phenomena sometimes observed in men: 1, simple genital ataxy,—2, genito-encephalic ataxy,—3, genito-gastric ataxy,—4, genito-encephalo-gastric ataxy,—5, genito-gastro-encephalic ataxy. Perhaps the greatest fault of this classification is, that it assigns too important a place to lesions of the stomach, which, when they really exist, are, in our opinion, of merely secondary importance. The two first classes are those in which the author has derived the best effects from the use of the ergot of rye. He administers it in combination with powdered sugar, not exceeding half a drachm in the 24 hours, and suspending its use for one day after exhibiting it for three or four days in succession. In one case which he relates of a young married lady, the employment of the ergot cured at the same time the hysteria and the sterility under which she had laboured a long time.

Amputation of the superior Maxillary Bone. By M. BOCCA.—A young girl, 19 years of age, was affected with a tumour on the left side of the face of the size of an orange; the alveolar border of the bone was tumefied and raised up the superior lip; the teeth appeared to be huddled confusedly together; the eye was closed by the swelling, and the orbital edge of the bone rounded. From the appearance of the symptoms, which had commenced two years back, M. Bocca pronounced the disease to be fungus of the maxillary sinus, and considering amputation of the entire bone to be the only effectual remedy, he performed it in the following manner: The patient being seated on a low chair and her head resting on the breast of an assistant, three incisions were made, after the manner of M. Gensoul, the inventor of the operation, that is to say, the first running from the inner angle of the eye to the upper lip which it divided opposite the canine tooth; the second proceeding from the lower third of the former incision and directed transversely towards the lobule of the ear; the third remounting vertically from the outer extremity of the latter. The bone being denuded, the operator divided with a strong scalpel the maxillary bone at its union with the malar, and then detached it from the os unguis and the ethmoid bone. Now, directing the patient to open her mouth widely, he separated with a bistoury the velum of the palate from its connection with the palatine bone. The operation was terminated by the section of the superior maxillary nerve performed by a bistoury introduced flat along the floor of the orbit, and the

extraction of the bone was then easily accomplished. Twelve points of suture were applied to the edges of the wound, and a bladder filled with ice laid over its surface. The results of the operation were most favourable, notwithstanding the development of traumatic fever of considerable intensity, which required three blood-lettings. She slept tranquilly at night. On removing the dressing, on the fourth day, the wound was every where united by the first intention. M. Bocca saw his patient again at the expiration of five months; there was no appearance of relapse; pronunciation and mastication were freely performed, and the saliva did not escape involuntarily.

A feature worthy of remark in the preceding case, is the division of the velum palati before the separation of the diseased maxillary bone from that of the opposite side. This stage of the operation, according to M. Bocca, requires great precision, and can be performed but with considerable difficulty after the section of the maxillary bone, on account of the blood which then escapes into the mouth. This opinion, however, admits of doubt. For the division of the soft palate is precisely the stage of the operation which excites the greatest effusion of blood; and if we commence by this, the efforts of the patient to get rid of the blood, which is every instant threatening suffocation, would render exceedingly difficult the separation of the roof of the palate along the median line.—*Memoriale Della Medicina.*

FRENCH.—*Physical, Chemical, and Microscopic Characters of the Blood in different Animals.* By Dr. MANDEL.—Blood, when drawn from its vessels, coagulates, and separates into the clot and serum. When a small portion of the clot is separated, it dries up and forms a solid, friable crust of a deep red color. This crust contains all the elements of the blood, except the water, which has passed off by evaporation. Coagulated blood, then, is composed of clot and serum, but the circulating fluid contains different elements. When examined under the microscope we find that it is composed of corpuscles (*blood-globules*), floating in a yellowish red fluid. What relation is there between the globules and *liquor-sanguinis* on the one hand, and the clot and serum on the other? The clot is chiefly composed of fibrin; it likewise contains blood-globules enclosed in their envelope. Modern researches also show that the liquor sanguinis contains fibrin in solution. When the blood is removed from its vessels, the fibrin of the liquor sanguinis coagulates, and, closing on a number of globules, forms the clot. The liquor sanguinis, thus deprived of its fibrin and globules, becomes serum.

Let us now examine the chief properties both of dried coagulated blood and of blood which circulates in the vessels, fixing our attention principally on the points connected with the subject of our researches.

The clot is red, and, from the serum which it has imbibed, soft. Its color is derived from the enclosed blood-globules, which latter, again, derive their color from the coloring matter (*hæmotosine*) of the blood; this matter dissolves when the clot is washed with water. The clot composed, as we have said, of fibrin and globules, parts with its color when immersed in water; but as the fibrin retains some of the globules tenaciously, frequent washing is required to remove all the color. We thus obtain a mass of white fibrin, composed of filaments intersecting each other in all directions, and very small in proportion to the clot from which it is derived. The fibrin is heavier than water, and sinks to the bottom of a vessel con-

taining it. These remarks will be found applicable when we come to speak of the chemical examination of blood-stains. Without entering further on this point we may say that fibrin thus prepared is insoluble in hot or cold water, but is very soluble in caustic potass.

The colouring matter of the blood easily dissolves in water by maceration of the clot, and this is a very important point in medico-legal researches. But the water thus impregnated with coloring matter contains, likewise, the elements of the serum enclosed in the clot. Now the chief constituent of the serum is albumen which we obtain by evaporating the serum; the albumen remains dry, but is soluble in cold water. When serum is gradually heated in a porcelain capsule it gets turbid at 65 deg. and at 75 deg. C. coagulates into an opaque mass, which is insoluble in cold or boiling water. But the appearance of the fibrin differs much according to the quantity of albumen and water contained in the mass. When the serum contains a little water the albumen coagulates into flocci; if the quantity of water be increased, it forms a milky looking solution, the color of which becomes clearer as the water is more abundant.

We can now understand what happens when a spot of blood is macerated in water. The coloring matter is dissolved, and falls to the bottom of the vessel in the form of red streaks; the dried albumen of the serum is dissolved by the water, and when the red colored fluid is heated, the albumen forms flocci, or merely gives a cloudy tint, according to the quantity of water employed in the maceration. Finally, the fibrin remains undissolved.

Let us now consider the principal microscopic characters of the blood, with a view of applying them to medico-legal questions.

If we place a drop of blood on a plate of glass, and apply another very thin plate over it, we obtain a transparent layer of blood, which affords many facilities for examination. If the blood be taken from one of the mammalia, we perceive round, flattened corpuscles floating in serum; their diameter never exceeds the hundredth part of a millimetre;* they are of a pale red color, inclining to yellow; these are the blood globules. Besides these we see another species of white mammellated corpuscles, having always the above diameter; these are the white fibrinous globules, or the *white globules*.

The edges of the blood globules expand on both sides, and there is a depression in the centre, giving them the appearance of a figure of 8. When we add a considerable quantity of water to the drop of blood already mentioned, and examine the globules after some time, we find that they have nearly altogether lost their color and their edges are now scarcely visible; the white globules have, on the contrary, undergone no change. The loss of color of the globules is proportionate to the quantity of water employed and the period of its action; thus, after half an hour, we find no trace of globules, which appear to be completely dissolved; but on adding a small quantity of tincture of iodine, they assume a yellowish tinge, and reappear. They are not completely dissolved before the expiration of one or two days.

Hitherto we have spoken only of the blood of man and mammalia, but it is well known that the globules of oviparous animals are of a very different form; the globules of the camel tribe, however, are analogous to those of oviparous animals. Their globules are elliptical, instead of being round like those of the mammalia, and their great

diameter generally exceeds the hundredth part of a millimetre. They are flat and of a yellow color, but instead of the central depression, they present an elevation in the centre. This elevation is produced by a central nucleus of an oblong shape, and granulated, which is the more evidently seen in proportion as the globules have been allowed to remain between the glass plates. When the blood of an oviparous animal has been dried in a thin layer, and the isolated globules examined, we get a perfect view of this central nucleus. On adding water the globules lose their color, but the nuclei remain unchanged.

Hence, if we examine under the microscope a portion of dried blood of a mammiferous animal, after it has been macerated for half an hour or an hour, we see nothing but one mass of fibrine, containing some white globules; but if the blood belong to an oviparous animal, we find all the nuclei distinctly visible.

Means of distinguishing Blood from all other Substances.—Since the researches of M. Orfila the mode of distinguishing blood from every other substance is well known to medical jurists, but it may be useful to say a few words on this subject. To ascertain the nature of a suspected stain, we macerate it in cold distilled water, taking care to leave a certain space between the stain and the bottom of the vessel. If it be a blood stain, we soon see a number of red streaks, which descend and redden the lower portion of the fluid; the tissue on which the stain exists loses at the same time its colour, and presents the appearance of a thin greyish layer, or of white, or whitish red filaments. This is formed by the fibrin and insoluble portion of the blood globules; the red streaks are formed by the colouring matter of the blood, which has been discharged by the action of the water.

We have thus two parts essentially distinct; the macerating fluid and the filaments. The fluid becomes lightly red when stirred up with a glass tube; when gradually heated to near the boiling point, it becomes turbid, suddenly changes its colour, and deposits flocks of coagulated albumen, or becomes opaque. If flocks are deposited, they are of a grey-green colour, and without the slightest tinge of red, the supernatant fluid being colourless or of a yellow-green tint. If the fluid be filtered and treated with potass, it assumes a green tint with reflected light, and a rosy tint with refracted light. If, on the other hand, the fluid be not filtered, and potass is added, the same result is obtained. Now, there is no colouring substance in union with animal matter which produces similar phenomena. As for the filaments, they are soft, slightly elastic, and soluble in potass, and the latter solution, treated with chlorine and a little hydrochloric acid, throws down flocci of coagulated animal matter.

By these characters, and others which we need not enumerate, the chemist can always distinguish blood stains from all other spots (those of citrate of iron, for example, rust, &c.) M. Raspail, however, is of a contrary opinion, and says "that if you leave a bag filled with madder for two or three hours in the white of egg, and then dry it at a temperature of 25 deg. to 30 deg. C., a red stain is obtained exactly similar to a blood-spot." But M. Orfila has completely refuted this objection, which might easily be decided by testing with lime. Hence, there is no doubt that the medical jurist can distinguish blood stains from those produced by any other colouring substance.

Consideration of the Means proposed to distinguish the different kinds of Blood from each other.—In reference to one of M. Orfila's memoirs, M. Dulong remarked, in 1827, that one of the most characteristic marks of

* 0.443 of a line.

a blood stain, even when old, is the form of the globules when examined under the microscope; with this instrument we can distinguish the blood of different classes of animals. The globules of dried blood of the mammalia present a white disc surrounded by a red circle, while in birds the white disc is surrounded by an elliptical globule." M. Orfila lost no time in verifying the assertions of M. Dulong, but his researches were not favourable to the use of the microscope. It results from the experiments of M. Orfila, "1, That, even admitting the blood to contain a number of characteristic globules, it is sometimes impossible to discover these globules in blood dried for any length of time on a piece of glass; and still more so when the blood lies on a piece of cloth, &c.—2, That although the globules of mammalia may be circular, and those of birds and cold-blooded animals elliptical, yet when we examine dried blood from a piece of linen, we find elliptical globules in the blood of mammalia, and round or triangular globules in the blood of birds; this probably depends on the mixture of some foreign particles with the globules." The opinion formed by M. Orfila was derived from his imperfect method of examination, and since his experiments no others have been made for the elucidation of this subject, at least with the microscope.

M. Barruel, however, attempted to resolve the question by chemical means. On mixing sulphuric acid with blood he pretended that he could distinguish by the smell alone the blood of different animals, and even the blood of the male from that of the female. But, although the experiments of M. Barruel were fully confirmed by several other medical men, we must acknowledge that the sense of smell is too uncertain and fallacious a test to be applied to questions of medical jurisprudence; besides, for the experiment of M. Barruel a considerable quantity of blood is required, a circumstance which rarely occurs when the opinion of a medical jurist is required.

Hence, it results that we are not acquainted with any means of distinguishing the different kinds of blood from each other.

Mode of distinguishing the Blood of Man and Mammalia from the Blood of Oviparous Animals.—When the medical jurist has decided that a spot examined by him is formed of dried blood, his task is not finished. The accused person may pretend that the stain was produced by the blood of a fish, a bird, or any other animal. I have just shown that we possess no means of distinguishing the blood of different species of mammiferous animals from each other, but my experiments enable me to affirm that we can distinguish the blood of this class of animals from the blood of birds, fishes, and reptiles. The following is the process which I adopt:—I have already mentioned that when a blood stain is macerated for some time in water we obtain the fibrine in a separate state: it is to this mass that we must direct our attention. Having prepared a piece of glass, like that used in other microscopic researches, we place on it a drop of distilled water, and then, with the point of a needle, scrape off some particles from the stain; we should choose in preference the edges of the spot, because here the dried blood is thinnest. The particles thus scraped off will be four or five in number, and not larger than pins' heads. They are next placed carefully in the drop of water, and allowed to remain for some time, until the colouring matter is removed; this generally occurs in half an hour at most. When the colouring matter is dissolved, we must remove some of the water by inclining the glass plate so as to let it run off over the edge; we then take a second plate, and place

it carefully over the drop of water, avoiding any degree of pressure; persons accustomed to microscopic observations will soon be able to ascertain the quantity of water necessary for any given experiment.

We have now the particles, deprived of colour and fixed between two plates of glass. The latter are placed under the field of the microscope. Our attention should be directed, at first, to the transparent edges, where we can examine the particles most readily. If the spots have been produced by the blood of a mammiferous animal, we now find an unorganised mass, enveloping some white globules; but if the blood be taken from an oviparous animal, we see a great number of oblong nuclei, closely applied to each other, in a coagulated mass of fibrin; the external edges of each globule are not visible. We thus distinguish easily the blood of a mammiferous from that of an oviparous animal; but the microscope does not enable us to distinguish the blood of man and other mammalia from each other because the globules present no distinctive characters. The presence of hair &c., may, however, furnish some useful information; thus we can easily distinguish the hair of a rabbit, ox, &c., from human hair.

TO CORRESPONDENTS.

Can Mr. Sayle send our Publisher the duplicates he received?

Mr. J. N. A.—*We shall be glad of the transcript.*

A number of letters have been received. Our correspondents' forbearance must be craved for another week.

We have received Mr. Dermott's important paper on a New Method of Treating Retention of Urine. It will certainly appear next week.

Searborough.—We hear the following from this town: A death occurred in the house of three old maids; the corpse was kept unusually long, and after its interment the room was locked up for two years. The room was some time since opened by three persons; two were struck down dead by noxious gases—the third narrowly escaped with life. Since that period a malady is said to have raged—deadly as a plague, and resembling it. Will some friend favour us with a contradiction of this statement, or, at least, an explanation?

B.—*We think our correspondent mistaken. However small the point of the tube it would yet provide no certain protection. The better way, we think, would be to have a bulb at the upper termination of the tube (as in fig. 1 or fig. 2) filled with chloride of calcium, which would arrest the air bubbles and the moisture.*

If Dr. Bloomfield, the Quack, who spells oculist with two e's (to intimate, we suppose, his superior attention to the seeing faculty) be, as our correspondent thinks, at the Oxford treadmill, we had better leave him there. Blind justice has, for once, seen better than the oculist.

H. J.—*The shortsightedness must be left to time and general care of health. The phenomena referred to arise from the convexity of the cornea being temporarily lessened by pressure. There may be something in the use of the convex glasses; but the effect referred to arises generally from increased age.*

Mr. Reeves (Carlisle) sends us a reply to Mr. Elliott's answer. He says the defensive evidence is exparte, that "the operation of lithectasy any surgeon with his senses about him will condemn, when he considers Sir Astley Cooper had rejected it by his silence, and the almost irreparable injury the prostate must suffer from a dilating force in action for many hours together. Is it not an established rule not to tear or stretch the prostate? Any one who now saw the poor victim Mr. Elliott made the trial on of stretching the prostate, would feel convinced of the iniquity of the operation—abscesses formed about the parts—the urine still distills through the wound—and on the 3d inst., nearly six weeks after the operation, he voided his faeces in the street, being

unconscious of it till a hint was given him of the state he was in." He gives the evidence of the father, that Mr. Elliott only got his son as a patient in consideration of his promises, &c., affirms that there were three physicians, and as many surgeons, in the infirmary, to attend to the operation, and finally gives a letter from Mr. Murison, to the effect that he heard the youth say he would have been operated on by Mr. Reeves if not seduced by Mr. Elliott's promises, and alarmed by his representations. Perhaps the matter had better rest here. When between two conflicting statements by gentlemen we have nothing to guide us but a youth's varying assertions, the best course is to draw stakes.

The petition against the King's College Hospital, and other Grave-yards, still lies for signature at our office.

Vol. 7 will commence with Oct. 1.—Orders should at once be given to the booksellers.

The list of new Foreign Books next week.

THE MEDICAL TIMES.

SATURDAY, SEPTEMBER 17, 1842.

"Eheu quam brevis pereunt ingentia causis!"

CLAUDIAN.

We have been often stopped in the mid-course of business, or evanescent thought, by the interposition of some more than ordinary incongruity of medical misgovernment, and again and again have we indulged our wonder at the admirable versatility with which good, and sometimes pious men, can accommodate not their politics only, but their morality to their ease—their vanity—and above all, to their interests. Indeed, as some writers have argued that happiness is divided among mankind in an almost equal ratio, despite all our seeming diversities; so we have been sometimes tempted to think morality is a much more equally partitioned quality among the sons of Adam than many of us have been apt to surmise. The virtuous element may exhibit itself in various phases—in different habits. Its absence or presence may be indicated by less or more obvious signals, but the amount is after all perhaps much the same. There is a noble principle of equalization in nature. Like a full-blown bladder, press her too tightly here and she will inevitably break out there. As with the Irishman's blanket, if we will have our morality longer at top, we must perforce have it shorter at bottom, and if the breadth be very expansive here, there seems a necessity that there shall be a corresponding want of length there; and thus, if the corporators of Lincoln's-inn-fields could be carefully scrutinized, we should probably find—we are inclined to think—despite the professed piety of this gentleman, the high honour of that, the lofty pride of a third, that their moral principles, like the political principles of one of their number, Mr. Lawrence, adapting themselves to their position, were on the whole not an iota more honest or virtuous than those which brought a Jack Sheppard to the gallows, or transfers his successors to Sydney.

We have been carried into this train of thought while observing the present state

of that medical education which is so vital in all its dependencies, and comparing it with the position it would most probably occupy, if our medical governors had no direct, immediate, personal, and family interests in the system they now patronize and defend.

It would be a waste of words to argue on the momentous importance of having every practitioner as perfect as the best of systems can possibly make him. A human being's happiness for life, or the human being's life itself, may be forfeited, by the doctor's being one line below the competency which a proper surveillance would secure. Every particle of ignorance or inexperience that could be shut out, and is not, may be the cause of the greatest of human misfortunes, a mutilation or a murder. Nothing, therefore, should be left to chance work, nothing to discretionary choice; for all the provisions that can be made to guarantee competency can only be omitted, by those who *can* make them, with the responsibility on their consciences of the multiplied misfortunes originating in their negligence.

Now is our medical education of a character like that of which a pious or a moral man would be anxious to bear the responsibility? or rather, is it not one, the *onus* of which even a Mr. Babington would recoil from with horror if he measured his public, with the same moral rule which he affects to apply to his private proceedings? Let us see.

It is an established fact, which receives confirmation from our first reflection if it need it, that medical science essentially requires for its due cultivation a mind prepared by the discipline of a sound and liberal education. To an illiterate—nay, to an unclassically educated youth—true medicine is a sealed chamber. Without a thorough knowledge of his own language—without an acquaintance with, at least, the principles of the collateral sciences—and without a competent command over Latin, the student might as well think of navigating the ocean in a pannier as being, in the safe sense of the term, a medical practitioner. Our medical governors are as convinced of this truth as we are; many of them know it from painful personal experience. One or two of them *we could name*, have their elevation embittered by a deep internal sense of their predecessors' disregard of this important circumstance: yet, what is their daily practice? To give not a single thought to the matter! A black footboy, who never heard of a declension, who could not comprehend a sentence of the Spectator, nor write a sentence of any kind, would, if ground in the mere nomenclature and localities of anatomy, (so to speak) be as eligible and as welcome to their diploma as a young Astley Cooper, or a Halford,—provided always that his black hand carried his twenty guineas! But why put an imaginary case? A fortnight since we published the only letter we have received, we believe, from any of their recently successful candidates; and, if that may be

considered a sample of what the rest would have forwarded us had we been equally favoured by them, we must be pardoned for thinking that the less a man knows of his mother tongue, and the less he is burdened with a preliminary education, the better chance he appears to stand of sympathetic approval by, and intercommunion with, the examiners of Lincoln's Inn!

But they *cannot* examine on preliminary education? Who says so? Their charter denies them no such liberty. They are, at least, as competent on that subject—and we except not poor Mr. Babington—as on any other on which they examine; and if even they could not *directly*, they could insist *indirectly* on the qualification. They have escaped other difficulties by bye laws and indirect means; why not this? Alas! they would escape, with the difficulty, a great many fees! Like the great man who gave the supper, they must not be too fastidious, and the morally halt, and lame, and blind, and deaf, are dragged in from every lane and corner—provided they have the wedding garment of the diploma money! Yet, a thought strikes us:—could an arrangement be made by which they themselves might give, or at least be *paid* for giving, preliminary education? If so, might they not be induced to insist on some qualification on that score, as they have insisted on some acquaintance with the anatomy *they teach*? All-anxious for preliminary education, we suggest this as a valuable compromise. To aid so good a cause we would enlist even the cupidity of an enemy.

But what is the nature of the security which the public possesses from the tests of competency established by the council on their own especial subject, surgery,—and what proportionally is the extent of the peace of conscience which, as moral men, they do, or rather ought to enjoy. We possess a remarkable document; it consists of all the questions put to a successful candidate:

“Have you ever dissected?”

“Suppose you take off the skin of the neck, what do you first see?”

“Taking off that, what next?”

“What nerves and veins accompany the carotid artery?”

“Describe the mode of tying it?”

“The course and branches of the par vagum?”

“How are the constrictors of the pharynx one with respect to the other?”

“Where does the trachea commence and end?”

“What prevents a piece of food getting into the larynx?”

“What are the ligaments of the ankle joint?”

“In compound dislocation of the joint, what is the state of the fibula?”

“If called to that accident, and you found that the tibia had been dirtied on the ground, what would you first do?”

“How would you treat it afterwards?”

“How would you proceed to take up the external iliac artery?”

“What are the relations of the femoral artery?”

We have here, then, the practical settled opinion of the examiners, as to the amount of medical and surgical knowledge which to their minds suffice to make a competent practitioner for society. The mere surgeon, we know, now declines no part of medical practice; Mr. Guthrie and Sir B. Brodie would no more decline a fee for a *pure* case of medicine, than they would, without some very weighty consideration, abandon their lucrative position at the Council Board. Yet, a knowledge of the items propounded in these fifteen questions is in the nineteenth century—in an over numerous profession—the satisfactory proof of a Surgeon's competency! Heaven grant that the public experience justifies—we will not say the singular opinion, but—the singular practice of our self-appointed and irresponsible judges.

Now, if we would appreciate the full force at once of the impolicy and immorality of the present system, we must remember that the whole substantial distinction between a medical practitioner and a quack is but one of degree; it is the distinction between the more and the less of medical knowledge. As a finished physician would in truth, and laying nominal terms aside, be no less a physician without license as with it, so a quack is no less a quack, because by the laxity, or selfishness of our medical corporations, his ignorance peeps from beneath the slender veil of a diploma. There can be no surer way to break down the demarcation between the two divisions, than to make money—not knowledge—the password into the profession; to make diplomas the representatives of the competency of the party's fortune, rather than abilities. Where will be the use of a peculiar profession when membership is the symbol of no peculiar merit? Whatever advantages then arise to a community from the existence of a carefully guarded profession of medical men, educated to the highest possible point consistently with a due regard to the adequacy of their numbers—and whatever calamities fall on the members of a society from the ignorance and sordidness of low uneducated practitioners, and from the chaotic confusion of all classes of pretenders to medicine—all these—both the possible benefits and real mischiefs—converge to form those mighty responsibilities, both of policy and morality, which weigh on the consciences of the twenty-one members of the Royal College of Surgeons, and weigh on them—we boldly add—not without the increased pressure which years of duties unperformed, and guilt unimagined, have accumulated about them!

ANTIDOTE TO CORROSIVE SUBLIMATE.—The hydrated proto-sulphate of iron (a substance quite innocuous) possesses the property of instantly decomposing corrosive sublimate. The products of the decomposition are the protochloride of iron and the bisulphate of mercury, inert substances.

DR. VERRAL ON A CASE OF ALLEGED PROFESSIONAL PIRACY.

To the Editor of the 'MEDICAL TIMES.'

SIR,—I venture to seek in your pages a space for the following statements, which, in justice to myself, I feel called upon to make.

In the year 1829 I received from the Society of Arts a medal for a PRONE COUCH, which I had invented some years before. In 1836 I read before the Westminster Medical Society an "Essay on the applicability and advantage of the PRONE POSITION in diseases, injuries and distortions of the SPINE, CHEST, HIPS, &c." The essay was noticed as usual in the medical periodicals, and was published entire in the *Medical Journal*, then edited by the late Dr. Ryan; since which time it has been re-printed, with additions, and largely circulated in the reports of the SOCIETY FOR THE TREATMENT OF DISEASED SPINE, HIPS, &c., of which I have the honor to be senior medical officer. In the year 1838 I twice visited the Margate Sea-Bathing Infirmary, where I met a young man of the name of CHILDS, a relation, I believe, of Mr. Coulson, at whose instance I presumed he paid me some particular attentions. There was then staying at Margate a lad named Rowlandson, who had long been a patient of the late Dr. Harrison, and who afterwards placed himself under my care as a patient of the society. On his recovery he went to Margate, and, for the benefit of the bathing, became an out patient of the Infirmary. This lad Mr. Childs often saw lying upon his couch, which he had not yet entirely laid aside. I that year presented to the Infirmary two of my prone couches, at the request especially of Mr. Coulson; and on my second visit Mr. Childs assisted in placing a patient on one of them. This was a very terrible hip case: the other couch was destined to the use of a poor man who had received an injury of the spine, and who was consequently paralysed.* As I never had the slightest communication afterwards made to me, as no account was given me of the progress of the patients, and no opportunity afforded me of seeing them upon the autumnal breaking up of the establishment I concluded that my plan of treatment had, as in many other cases, been inadequately and insufficiently employed, and the couch perhaps thrown aside as useless. In this supposition it appears that I was entirely mistaken. The value of the couch was assuredly appreciated by one person at least, as the gold watch is appreciated by the gentleman who gently conveys it from the pocket of its owner to his own. This very young man, Mr. Childs, having, it seems, removed to London, in the year 1840 publishes a book; but before he did so, he reflected—a thing much to his credit. How many young authors—aye, and old ones too—publish books without reflecting at all? But Mr. Childs reflected, as he himself informs us; and what do you think he reflected about! Why, having made up his mind that lying on the back for the cure of lateral curvature was in every respect objectionable, "he was led to reflect whether that position could not be superseded, and its disadvantages obviated by a different one."

Great wits have short memories. Mr. Childs must be a very great wit. In less than two short years he must have forgotten me, and my couch, and the society's report, and my patient Henry Rowlandson; he must have forgotten—entirely forgotten—my essay, and all the cases of lateral curvature enumerated in it: all these things he must have absolutely forgotten, or he could not, *with truth*, have said that he was led to reflect whether the supine position might not be superseded by a different one. My conversation, my patient, my essay, the report, the plate, the couches themselves—had all proved to him, by ocular and amicular demonstration, almost two years before, that the supine position could be so superseded, and its disadvantages obviated by another. He could not have been led to reflect

whether a certain thing could be done, when a certain person had proved to him that it could be done, that it was done, that it had for many years been done, unless, as I presume, he had forgotten that person and all the proofs he had afforded him. Nor could he, *with truth*, have said that he was induced to *try* the prone position in consequence of Mr. Bampffield's recommendation, when he had seen me *try* it, and had had for many weeks before his eyes one proof at all events of its "infinite superiority." Nor could he, *with truth*, have called it a "*new* feature in the treatment of lateral curvature," when he had known that I had invented the couch that he employs about the time that he was born, and that the report and my essay contain many proofs of its successful application to the cure of lateral curvature, unless, as I said before, he had utterly forgotten me and every thing about me. But great wits have short memories. I ought not to be offended at Mr. Childs' forgetfulness of me, for he would seem to be so great a wit that he often forgets himself. This especially appears from his talking so frequently about his great experience; as, for instance, when he says, "*from my experience in the use of this couch I have observed, &c.*"—that experience, dating from the time when he first saw my couch, might have extended over a period of about a year and three-quarters, but, as the processes of forgetting, reflecting, and constructing must have taken up some time, we will allow him a twelvemonth's experience after he had hit upon a couch exactly like the one he had so speedily erased from his memory. But for this forgetfulness he could never have written so much about "*my experience*," "*experience fully justifies me*," &c. &c. Mr. Childs, Sir, should have a good memory, and I earnestly recommend to him the study of mnemonics.

But to be serious, if Mr. Childs and his book will let me. I have hitherto, in jest, given Mr. C. the choice between the two horns of a dilemma—want of honesty, or want of memory; I fear that, in sober sadness, I cannot be so favourable to him, but must accuse him of as gross a piece of plagiarism, or, to use a more English and more appropriate expression, as dead a robbery as was ever charged against a gentleman at the bar of the Old Bailey, or one of the amiable heroes of Mr. Ainsworth's novels. In the first place he has stolen my couch—not borrowed it as a gentleman might do—but fairly stolen it, appropriated it, conveyed it, as ancient Pistol says, without permission, and without acknowledgement. Yes, that very prone couch for which the Society of Arts twelve years ago awarded me a medal, although they knew not then, for I could not tell them, half the advantages which I have since found it to possess,—yes, that very couch Mr. Childs has stolen, and tries to persuade the world to consider it his own. No one who reads his book can close it with any other impression. It is always "I was led to reflect,"—"I was induced to try,"—"I may be expected to offer a few observations in reference to its superior merits." No one in short can believe that the prone couch was ever made or thought of until Mr. Childs one fine afternoon sat himself down to "reflect."

In the second place he has stolen my picture; my very identical young lady, lying upon her prone couch, which was sketched for our report by my young friend, Mr. L. There she lies in all her original gracefulness and ease, with the very ringlets she wore in 1838, and the very shawl which was presented to her by our excellent friend, Mrs. O. There she lies on her couch—my couch—with its turned legs, its ornamented feet, its pillow for the instep, and even with the very imperfections and omissions of the original plate. The first report of our society is out of print, and the second, recently published, does not contain this picture; but I will leave in the hands of our publishers, Messrs. Houlston and Hughes, 154, Strand, a copy of each of the plates, that any one anxious to examine the proofs of so barefaced a theft, may have an opportunity of doing so.

Thirdly and lastly, he has taken from my essay, also without acknowledgement, paragraph after paragraph of description, explanation, and practical observation: nay, he has actually done, what I would have readily forgiven had that been all, he

has stolen one of my bad jokes, and given it to the world as his own. The only defence that Mr. Childs can make to these charges is, that he has borrowed from Mr. BAMPFIELD, and not stolen from me—that as Mr. B.'s recommendation of the prone position was perhaps published before my invention of the couch, he was fully authorized to advert to him as the originator of the plan, without taking the slightest notice of me, whom he considered as only a copyist. I put this defence in the strongest light, that my answer to it may be the more complete. The defence shall avail him nothing. Mr. B., it is true, in his prize essay, of which I never heard until a few months ago, recommended the use of the prone position in some cases of *posterior curvature*, and gave some excellent reasons for preferring it to the supine; and, *therefore*, Mr. Childs asserts that he was induced to employ it in the treatment of *lateral curvature*. But I shall prove that it was from me, and not from Mr. BAMPFIELD that he took the idea, or rather stole, not only the idea, but the couch and the whole concern. In the first place he had never heard of Mr. B.'s recommendation of the position before he saw me at Margate, or he would of course have mentioned it in our conversations there. But this is not all. Mr. B. recommended no particular couch, he merely laid his patients prone on a common bed; he calculated only upon the falling down into their places of the lumbar and lower dorsal vertebrae; for in those cases alone Mr. B. recommends the employment of the position. He never calculated on the benefit to be derived from "gentle but constant extension;" he thought not of "the angle corresponding with the bend of the hips," which gives so much ease and so many advantages to the position. But these things Mr. Childs did not think about. He sat down and reflected. Deep, no doubt, was the reflection! Severe the throes of mental parturition! The mountain was in labour, and lo! it brought forth—not a mouse—but a couch, and one so like to that which he had assisted me to employ at Margate a few months before, that any one would swear they were twins.

If this be not proof enough of the weakness of his anticipated defence, let us proceed a little farther, and we shall find plenty more. He goes on, after this, to talk of Horace, and the harvesters, and the haymakers; of the angle, of weights to the feet, of the influence of the position over the digestive organs, &c. &c., all of which are mine, and have nothing to do with Mr. Bampffield. I proceed to select from Mr. Childs' book a few passages which I shall place in juxtaposition with analogous ones of my own, and it will then be seen that he has not only stolen my bantlings, which he has sometimes disfigured a little, but has actually had the effrontery to parade them about in the very dress that I myself had given them:—

Dr. VERRAL,—1836-38.

"I went away considering whether it might not be possible to place him in some other position." (Than the supine in which he was lying.)

"I thought of the haymakers and harvesters, and the shepherds whom I had often seen lying on their faces; and although Horace, I believe, tell us that 'malus pastor dormit supinus,' I concluded that as it is 'malus pastor' who so sleeps, I would venture to send my young friend to sleep in the PRONE POSITION."

Mr. CHILDS,—1840.

"I was led to reflect whether this position might not be superseded, and its disadvantages obviated, by a different one."

"Horace tells us 'malus pastor dormit supinus,' (a bad shepherd sleeps with his face upward); and if we only take the trouble, we may satisfy our minds on this point, by observing that the prone position is invariably assumed by harvesters and haymakers, after the fatigue and toil of labour."*

* On that occasion I took with me the first report of the society, in which was a plate of a young lady lying on the couch—introduced merely to show the great ease of the position, and the capabilities it offers for recreation and employment.

* The reader is left to discover the sense, or to laugh at the nonsense, of this passage. The quotation, the expressions, the imagery, are mine, but the perfect "no-meaning" belongs, I hope, to Mr. Childs.

"After many trials, I found that a slight angle in the platform, corresponding with the bend of the hips, rendered the position extremely easy."—"As I do not allow the feet to rest on the foot-board, there is, owing to the depending state of the legs, a gradual but constantly acting strain upon the parts, tending to stretch out and straighten the distorted column, &c."

"It enables me to keep up a continued extension of the spine, and to increase that extension by weights to any amount that may be wished."

"The constant strain upon the spinal column, at the same time that all weight is taken off from the yielding pillar itself, &c."

"I have at present under my care more than one young lady, not only able to read, write, sew, knit, &c., but even to practise on the piano-forte, while lying prone on the couch."

"As the food may be taken without the slightest movement of the body, &c."

"But, perhaps, the most important result of the prone position is the power it possesses of improving the state of all the organs of digestion. In this position the appetite is increased, and the digestive process is carried on in unwonted perfection; the general health becomes in consequence improved, the mind is rendered contented and cheerful, the body grows and increases in plumpness, and the face recovers its natural juvenile appearance."

Your readers, Sir, will now be convinced that I have not wrongfully accused Mr. Childs. They will agree with me that he has not been satisfied with the advantage which an author may lawfully take of the works of a predecessor, but that he has pilfered the inventions and ideas of another, and, from interested motives, given them to the world as his own. No passages from my essay are given by him as quotations. He never mentions or even alludes to me. The names of the dead are allowed to adorn his pages. Esculapius, Hippocrates, Celsus, Shaw, Bampffield, Tristram Shandy, are permitted to make their appearance here; but from them the names of living authors are completely and unceremoniously excluded.* And why is this? I will answer the question by another. Does Mr. Childs know anything of what Mr. Bampffield calls, "the little jealousy that would conceal the merits of a cotemporary author," and does that prevent him "from promoting the

"We are enabled, by forming a slight angle in the reclining-board, corresponding with the bend of the hips, to keep up a continual extension of the spine, &c.—the feet ought never to be permitted to rest against any support, &c."

"This extension may be increased, by the addition of weights, to any amount we wish."

"In the prone or facial position all superincumbent weight is taken off the spine."

"The patient has a free use of her arms, and can exercise them as she pleases, whether in drawing, music, &c., or in the amusements of reading, playing chess, &c."

"Whilst lying on the couch, the patient can take her meals without inconvenience."

"But, amongst the good effects of this position, I ought to mention the influence it has over the digestive functions.—The appetite is improved; the bowels become regular; the mind is rendered cheerful, contented, and happy; and the body becomes plump and fat, and the face recovers its natural juvenile appearance."

welfare of the profession," by giving "unique suum?"

But he who is unjust to the living will rarely be just to the dead. I have not time, nor could you allow me space, to trace out all Mr. Childs' piracies; but I may say generally, that almost the whole of his 9th section is made up between Mr. Bampffield and myself, though that gentleman stands out as the admitted author of only one short paragraph; and I have casually discovered that a part of page 32, and the whole of pages 33 and 34, are taken almost word for word from Mr. B., while only the concluding passage is marked as a quotation, and that evidently is the printer's doing and not Mr. Childs'. Two more unfortunate authors subjected to the plucking that Mr. B. and I have undergone would enable a man to make up a nice little book; and Mr. Childs' is a nice little book, to what extent it has been thus made up "this deponent further sayeth not."

I am unwilling, Sir, to hurt the feelings of any man. It is I hope my moral as well as my professional character not to irritate but to soothe, not to wound but to heal; but "he that filches from me my good name" as Mr. Childs has done surely deserves to be chastised, and I trust you will not think that I have laid it on too thickly.

I am, Sir,

Your obedient servant,

CHAS. VERRAL.

Howland Street, May 10, 1842.

REVIEWS.

The Anatomy of Sleep, or the Art of Procuring Sound and Refreshing Slumber at Will. By DR. BINNS, M.D., Member of the Royal Society of Antiquaries of Scotland, &c. &c. London: John Churchill.

WE are told that this beautifully printed work was composed by machinery; that every letter in the 394 pages, instead of being singly picked up by a trained compositor and fixed by him in its allotted place, received these services at the hands of a machine resembling a piano-forte, worked under the easy direction of a female. This, though no ordinary wonder—it is the first of its kind, we believe, in the annals of typography—is, nevertheless, the least wonderful part of this singularly characterized book. No wonder in the heavens above, or the earth beneath, or the waters under the earth—certainly none in past histories—seem to have escaped the observation of the vigilant eye of the author, or the chronicling of his industrious pen. The conquest of that wayward deity, sleep—at will too—without narcotics; the theory of sleep; the nature of dreams; with the record of all those of most startling interest,—somniaambulism, with its novelties—mesmerism, with its miracles—swoons, trances, asphyxia, with all their incidents—abnormal psychological phenomena, apparitions, hallucinations, and monomania, with all their fantastic tricks as recorded of the great and eminent—psychology and animal being, with all their absorbing mysteries: these are among the topics, with a hundred other subsidiary subjects of equal attraction, which are dilated upon by the author, and with the evident gusto of one who is dealing with a subject after his own heart, and with an interest for the reader which we do not overrate in saying equals that excited by a novel of Walter Scott, or a play by Sheridan. Johnson, who confessed to being kept awake for one night in his life, by the *Anatomy of Melancholy* by Burton, could by no possibility have escaped a repetition of the extraordinary self denial he wondered at, if happy enough to have had the *Anatomy of Sleep* by Binns. It is the very book the Lexicographer would have delighted himself in hugging and gloating over.

Passing over the three first chapters in which, after generally announcing his subject, the author gives in a popular style the latest opinions on the physiology of life, with the anatomy and functions of the brain, we are brought to the author's views on the nature of sleep. He says:—

The phenomena of NATURAL SLEEP may be thus described. Its approaches are marked by a sense of muscular fatigue; the legs become weary, the arms indolent in their movements, and the hand unsteady in its object. Yawning, without our having the power to prevent it, follows or precedes this state; the attention languishes; the most interesting narrative fails to awaken it; we become captious and even fretful. In the mean while, external impressions begin to fade. If we attempt to read, lines run into each other, and, if we look from the candle to the page, the letters will appear of a greenish, or bluish cast. The memory becomes confused; the eyes grow dim and lose their brilliancy, while the upper lids fall, in spite of our efforts to uphold them; next, the muscles of the back and neck relax their tension, and the head falls unwillingly forward. But the sense of hearing remains still unimpaired, and we hear, and understand the conversation of those around us, when we can no longer distinguish their persons or perceive their gestures. Anon, a succession of pleasing reveries approach and depart in calm succession. The brain appears to float in a dreamy sea of peaceful enjoyment; a pleasing delirium supervenes, and we no longer wake, we sleep. The organs of the senses, laid asleep in succession, awake in the same order. Sounds and light produce impressions, confused at first on the eyes and ears. In a little while, these sensations grow distinct; we smell, we taste, we judge of bodies by the touch. Thus it is, then, we return to the state of wakefulness, to a sense of the condition of our being.

This is the author's eloquent description of the mind in a dreaming state:

Dreaming, is that condition of the brain, when one or more organs, or functions, are called into action, during the repose of the voluntary muscles, and the following may be taken as an outline of the phenomena; after a hearty supper, or, sometimes, without this obnoxious meal, and during sleep, a portion of the cerebral organs become excited. Imagination reproduces scenes before visited, or awakens sensations formerly experienced; or, it becomes inventive, and discovers new places, new forms of things, and novel modes of sensibility. It conceives, fancies, or creates, associates, and combines objects; sometimes incongruous and discordant; sometimes natural and normal; often exquisite and beautiful; but more frequently, horrible and repulsive. We see huge monsters; vast plains; innumerable armies; indescribable creatures; transcendent beings; unimagined forms; inscrutable chasms; stupendous mountains; or we witness astounding prodigies. We perceive the sun and moon on our right hand; the stars on the left; the elements, fire, air, earth, and water, at our feet; and the glory and the brightness, and the brilliancy of ten thousand thousand meteors, above our heads. We hear, we talk, we move; walk, run, swim, fly. No obstacles arrest, no impediments obstruct our progress. Space, time, and probability, are annihilated. We are, at once, in China and Peru; in London and Affghanistan; in a boiling cauldron, or a frozen lake. Transition is as rapid, as the electric bolt, that, shot from the sky, topples the lofty minaret to the ground. We experience all the emotions of love, joy, hope, fear, grief, surprise, and terror. We caress, exult, anticipate, tremble, weep, shrink, and shudder, in a second of time; and all these fancies, these crude and incredible imaginings, are recollected and remembered when we awake, and sometimes are never totally forgotten. This then is the condition of dreams.

The author is now carried by a natural transition to animal magnetism, in which he avows himself to be a devout believer. He

* The only exception, I believe, is in favor of his friend or relation, Mr. Coulson. That gentleman told me some three or four years ago, that he would make honourable mention of my couch in the next edition of his works; he has, I presume, deputed the task to Mr. Childs.

cites Lafontaine's cases, as given in the *Times*, and one of Dr. Elliotson's, as published in our *Journal* (No. 136); these we may omit as known to most of our readers. Chapter V. gives us a treasury of rare and richly interesting information on drowsiness and its concomitant or kindred subjects, narcotism, trances, premature interments, &c. How the author got his numerous and curious illustrative cases, without the aid of some assisting genius like that he records when speaking of Socrates and Tasso, we are at a loss to conceive. The books that were read in their acquisition must be beyond calculation, and the memory that retained them one devoutly to be wished for by those who, like ourselves, have need for it proportionate to its absence. Among the most striking of premature interments is certainly that of Dr. Walker. Who can read of the presentiment, the careful precautions, and the horrid catastrophe terminating them, without a shudder?

The case of Dr. Walker is thus told by Mr. Bellamy; but we have abridged a portion of her redundancy, in which, like many lively writers, she sometimes too much indulges:—

"Upon our arrival in Dublin, my mother and myself were very kindly received by Dr. Walker. The doctor, at this time, was writing a treatise against the Irish custom of burying the dead within a few hours after their decease. When my mother heard on what subject he was writing, she related to him the story of Mrs. Godfrey, and as soon as she had concluded it, she promised, that, if she should be in the same kingdom with him when he died, she would attend to the corpse, and take care that it was not entombed whilst there was the least probability of return to life." The sequel of the story is, for we have deviated somewhat from Mr. Bellamy's narrative, that, some time after, Dr. Walker fell ill of fever, and "one afternoon, sending to inquire after him, the servant returned, and informed her, that he had died during the night, and that they were going to bury him; she added, that as they were about to shroud the body, the orifices which had been in the arms for letting blood, had bled afresh." For reasons which are stated, neither Mrs. Bellamy, nor her mother, could go to the doctor's that night, and they therefore sent the servant in a coach, directing, that if the body was interred, to have it taken up at all costs, for they had learned, that Mrs. Walker had been persuaded by her sister to leave the house, and retire with her to Dunleary. The servant while on her way, either from apprehension or love of company, contrived to take several persons with her, and, on arriving at the doctor's, found the body had been interred immediately after she had left, lest the disorder of which he had died should be infectious. She also learned that, Mrs. Walker being a dissenter, the body had been interred in the Anabaptist burying-ground, at the other end of the town. She proceeded, therefore, in search of the sexton, still accompanied by her friends, but as they could not find his house, they clambered over the gate, and got round the grave, where the servant alleged she heard a groan. About daybreak, by means of some labourers who informed them where he lived, they found the sexton, who, after considerable hesitation, disinterred the body, and, on opening the coffin—"I shudder while I relate the horrid scene," says the authoress,—"they found the body now totally deprived of life, but observed that the doctor had endeavoured to burst it open, had turned upon his side, and the arms had bled afresh! The family, however, hearing of the circumstance, the body was ordered to be re-interred, and the affair was hushed up.

Here are two interesting cases in the author's personal experience. How powerfully do they plead for a medical police in every part of the empire!

Thus far we have given cases on the authority of others: we now present two on our own. The first is that of a gentleman named L— G—, a

Scotchman by birth, but emigrating early in life to Jamaica, became from his long residence, as it were, almost a native. Happening to be attacked with fever, after a few days he was supposed to be dead, and the body abandoned by the medical attendant. From the rapid decomposition which animal substances undergo, immediately as the phenomena of life cease to manifest themselves in the West Indies, interment generally takes place very soon after the breath has left the body, and, accordingly, in twenty-four hours from the time of the supposed death, this gentleman was shrouded and put in a coffin. Fortunately, however, for him, the preparations for the funeral were delayed some ten or twelve hours, and, when the undertaker proceeded to screw down the coffin, those about him perceived a moisture on the skin. This led to further examination, and it was discovered that he was alive. Remedies were instantly resorted to, and he recovered and lived many years after to tell this story. A melancholy event, however, was connected with his recovery: a young female, who had assisted to make his shroud and cap, whether from over-exertion, anxiety, or the malignant nature of the fever, fell ill as he recovered, died, and was buried in the very shroud which she had made but a few days before!

The second case was brought under our notice in the following manner. Passing through Glasgow, in 1825, we fell in at the hotel, with a gentleman who had been in the West Indies, and, as we had left Jamaica but twelve months before, it naturally followed that a sort of intimacy sprung up between us on the spur of the moment, and we conversed very freely on various subjects. He was an intelligent man, and presuming, therefore, on his good sense, we took the liberty of asking him the cause of a remarkable scar which he had on his forehead? He replied, without hesitation, that, when a youth, he had been sent to a relative in Dominica, a general merchant or store-keeper there, and that he became his clerk. After a short residence in the island, the relation who, lived some distance from Roseau, the principal town in Dominica, was attacked with fever, and, as was supposed, died. According to custom, he was within a very few hours after shrouded and placed in a coffin; and as the narrator was the only white person within a considerable distance, he was requested, by the brown housekeeper and the other attendants of the supposed deceased, to sit up with the corpse. Feeling drowsy towards daybreak, he laid his head upon the table, his face being towards the coffin, and the door to his right hand, and fell into a dose. He could not have been long asleep, when he was awakened by a strange noise, and, lifting up his head, to his horror he beheld the corpse shrouded in its hideous grave clothes, making desperate efforts to get out of the coffin, having pushed off the lid, which had been laid over it, but not nailed down. His fears were extreme, and for a few moments he could not stir; but as the corpse projected one leg, in the act of getting out of the coffin, his terror animating him with desperate resolution, he rushed to the door and plunged headlong down the stairs, at the bottom of which he lay insensible. The noise of the fall brought all the inmates to the spot, when they discovered that the gentleman was not dead, but had been only entranced. He recovered perfectly in a few days, and lived many years after; whereas our narrator had fractured his skull, and never thoroughly recovered his health, until he returned to Scotland.!

Here we close our first notice of this treasure for the reading public. The work, to our minds, is by far the most interesting that has issued from the British press for many a year, and will at no distant day, we confidently predict, be found in every man's library. The scientific portion of the work, though popular, from the author's aim, is, if not novel, nor profound, sound and orthodox; the knowledge of the peculiar antiquarian lore treated of in the various parts of the work is, as we have said, amazingly extensive—unparalleled, we may add; the style of writing, as our readers have seen, is off hand, but pure—bold, yet not

ungraceful—free, but not without elevation; the sentences, slipping of his pen, now curt and light built—now rounded and dignified—yet all in harmony. And taking all these advantages into account, with the author's subject and aim, we shall be much astounded ourselves if this book do not produce an astounding sensation with the public.

A Treatise on Mineral Waters, with particular reference to those prepared at the Royal German Spa at Brighton. By J. C. A. FRANZ, M.D., M.R.C.S. Churchill.

NOTWITHSTANDING the fact that books on mineral waters are usually published solely to advance the practice of those who publish them, and notwithstanding the fact that empiricism in some form or other, must appear to lie at the foundation of all such publications, the work before us is upon the whole the least exceptionable, and certainly the least suspicious, of the class. Dr. Franz is evidently both an educated and intelligent, and we have good authority for adding a highly honourable, practitioner, and we could have wished that he had devoted himself to a theme more worthy of his talents, and less likely to excite distrust, than that of "Mineral Waters prepared at the Royal German Spa at Brighton," where the worthy Dr. himself resides. We cannot subscribe to the opinion that factitious mineral waters are equally useful or potent in the cure of disease as natural mineral waters; because the chemical analysis of these waters is not sufficiently perfect to enable us to form a perfect *fac-simile*; and the adjuvants which attend the use of the waters at the natural spring, and on which so much of the cure depends, are altogether wanting, and cannot be created by artificial contrivances. The work is principally intended, as the author informs us, for general readers, and we have one chapter headed, "Some Advice for the Ladies." We have no objection that books on "Popular Medicine" should be written; but if written for the benefit of the public, we have a right to insist that the author shall be consistent in what he writes;—that he shall not introduce either subjects, or modes of expression, which the "public" cannot be supposed to comprehend. How intelligible to "young ladies" must be our author's clever chapter "*On Organic Life!*" and we can fancy the raptures into which our grand-mamas would be thrown by the study of the chapter "*On the general Doctrine of the disturbance of Organic Life.*" But Dr. Franz's book is both scientific and popular. From the 1st to the 111th page, the book may be perused with advantage by the scientific medical enquirer: the remaining 30 or 40 pages being of a more popular turn may be consigned to the admiration of the "ladies."

MEDICAL MEMS. OF THE WEEK.

IMPORTANT DISCOVERY.—Dr. Patterson, of Rathkeale, has been instituting a variety of experiments on nitrate of silver, and he gives us the following as their results:—1. The nitrate of silver cannot be taken in to the circulation *undecomposed*; for being so readily decomposed by the saliva, by the simplest articles of diet, and by the healthy and diseased secretions of the stomach itself, it must, he says, be admitted that not an atom of that salt, when administered in medicinal doses, is taken into the circulation. Consequently, it cannot arrive at the capillaries of the skin, there to be converted into the chloride; and we must infer the curious fact, that when a physician prescribes this preparation of silver, and his patient recovers his health, it is not the nitrate, but some other combination of the

metal that accomplishes that happy result.—2. That chloride of silver is the active agent in all the cases of decomposition he experimented on, and that, therefore, in the medical employment of silver it would be preferable practice to prescribe the chloride directly.—3. That the discolouration of the skin then is most probably owing to the decomposition of the chloride of silver circulating in the cutaneous tissue through the chemical action of the sun's light, and the deposition there of its metallic basis. All persons are not subject to this accident; for the influence of the sun's rays can only be effective in those cases where the cutis is more than ordinarily vascular, and is clothed with a thin transparent cuticle.—4. That nitric acid is useless in the way of preventing the decomposition of nitrate of silver, and that the ioduret of silver, while performing all the curative purposes of the nitrate of silver, not being liable to be acted on by chlorine, or the sun's rays causes no discolouration of the skin.—5. That there can scarcely be a doubt that in those cases, where the skin has become discoloured from the long use of nitrate of silver, the discolouration may be removed by the internal and external employment of suitable preparations of iodine.—Dr. Patterson prepares ioduret of silver by adding to a solution of the nitrate in distilled water a solution of hydriodate of potash, in atomic proportions. If one hundred and sixty-four grains, or one proportional of ioduret of potassium, be dissolved in two or three ounces of distilled water, and one hundred and seventy-two grains, or one proportional of nitrate of the oxide of silver, be dissolved in two or three other ounces of distilled water, on mixing the solutions, two hundred and thirty-four grains, or one proportional of ioduret of silver are precipitated. The whole is to be then thrown on a filter, and the ioduret of silver should be washed with repeated affusions of rain, or distilled water, and then dried in the sun, or before a fire. If the ioduret of silver, so formed, be in the slightest degree contaminated with any nitrate of silver remaining undecomposed, the former will be liable to discolouration. It is best then to use the ioduret of potassium in very slight excess; and for facility of practice, equal weights of each salt, may be employed. Ioduret of silver, thus prepared, is a soft, rich-looking, granular powder, having the beautiful pale, greenish-yellow colour of the canary bird. Like calomel it has neither taste nor smell, and is insoluble in water; it resists the action of the diluted nitric, muriatic, and acetic acid, of the alkaline sub-carbonates, and of hydrochlorate of soda; and it is very sparingly soluble in solution of hydriodate of potash.—From the insoluble nature of the ioduret of silver, and the smallness of its dose, the form of pill seems best adapted for its exhibition. It should be reduced to the state of the finest possible powder, which is not easily effected, on account of its possessing a certain degree of coalescence that causes it to adhere to the pestle. For that reason, and for its more exact sub-division, it is necessary to triturate it with a few grains of some compatible salt. It is also of advantage to add a little liquorice powder to give some bulk to the pills, and a little sugar or syrup to prevent them from becoming too hard. The following is the formula which Dr. P. has employed:—*R. Iodureti argenti—Nitratis potassæ ana grana decem, tere simul ut fiat pulvis subtil. dein adde. —Pulv. glycyrrhizæ, ʒss.—Sacchari albi, ʒi. —Mucil. arab. q. s. M. fiant pil xl., quaram æger sumat unam ter in die.*

EFFECT OF GESTATION ON FRACTURE.

—Mr. Oswald presents us with one of those not-unusual cases, where, despite every exer-

tion, a severe compound fracture was hindered from reunion by gestation. The explanation, of course, lies in the great demand for ossific matter from the subject, by the fœtus. After three weeks to the time of parturition, the woman enjoyed excellent health, and an entire absence of local irritation and suppuration. The pain then renewed, and the sanative process commenced. Mr. Oswald wisely forbade his patient to suckle the child.

REVIVIFICATION OF MICROSCOPIC ANIMALCULÆ.—When a few drops of water are sprinkled on moss which has been kept dry for months or years, certain microscopic animalculæ make their appearance; but it has not been decided whether these little animals are really brought to life again, or whether their ova had not remained concealed in the moss, and were afterwards vivified.—M. Doyere has found with the microscope, in the dried sand of rain-spouts a number of small bodies, which closely resemble the remains of these animalculæ deformed through the effects of desiccation. He has taken these remains, carefully dried them on glass plates, and found that they were afterwards capable of being restored to life. On pushing his experiments further, he found that on applying heat at 145 deg. or 150 deg. Fahrenheit, the animalculæ were destroyed, and it was impossible to bring them to life again. But when they were previously dried, and all the moisture which they naturally contain was gradually expelled, they resisted a very great degree of heat; in some experiments the heat was carried to 120 deg. C, and the animalculæ afterwards restored to life.

ON THE EMPLOYMENT OF INDIGO IN EPILEPSY.—M. Podreeca states that indigo, either alone or combined with castor and assafetida, is almost a specific in epilepsy. Its antispasmodic powers seem to be greatly increased by the above combination. The following is the usual form in which he administers it: indigo, 1 drachm; castor, 8 grains; assafetida, 16 grains; to be made into 18 pills, and one to be given every hour and a half.

ON THE MODE OF PERFORMING CERTAIN SURGICAL OPERATIONS.—M. Pagello gives a few useful hints to young practitioners, especially such as are practicing in the country and may be unable to procure any assistant, in performing some slight operations. Thus, in opening an abscess, we should always take care, before commencing the puncture, to place the patient in such a position that his movements will only assist in enlarging the incision in the most suitable direction. As a general rule, therefore, it will be prudent to make the puncture from below upwards. The removal of the amygdalæ, the opening of abscesses in this region, the excision of the uvula, &c. are especially rendered difficult by the movements of the patient. To overcome this inconvenience, M. Pagello recommends placing the individual in a chair reclining against the wall and resting on the ground by its two hinder legs only. The patient, being thus balanced, will remain motionless, for the least movement would expose him to the danger of a fall. To occupy his hands, a handkerchief should be passed under the seat, and the extremities given to him, at the same time persuading him that the success of the operation depends on his not losing his hold.

ON THE EMPLOYMENT OF THE GALIUM VERUM OR CHEESE-RENNET IN SCROFULA.—M. Ferramosea states that he prefers this medicine to the reputed specifics for scrofula, and even to iodine. It should be employed only in pure scrofulous disease, unattended by any complication. Chemical analysis shows its virtue to depend on the presence of acetate of potash,

gallic acid, and tannin. Externally, the leaves are applied over the enlarged glands or ulcers; internally, the expressed juice is administered, the dose being regulated according to the effect induced.

BLUE FOOT FROM SUPPOSED GOUTY DIATHESIS.—Dr. William Kingsley, of Roscrea, gives us the following anomalous case:—Miss A., aged sixteen, was attacked in November, 1840, with a severe circumscribed pain in the sole of the left foot, under the little toe. Both her grandfathers and her paternal grandmother were martyrs to gout. The pain was supposed to have been caused by the prick of a thorn, or from a nail, and was poulticed. A small vesicle made its appearance, the discharge from which was trifling; but the small sore caused by it was very slow in healing. The pain extended to the foot, in creasdailling in severity; the calf of the leg was a little swollen and painful on pressure, as also the upper and inner part of the thigh. The entire of the foot became very much swollen, particularly in the day time, when sitting up, but at night, and while in the recumbent posture, the tumefaction nearly subsided. The whole foot now assumed quite a blue appearance; the entire surface exhibited the greatest morbid sensibility; it felt as cold as ice or marble, just like a person in the last stage of Asiatic cholera; but the skin, &c., were not shrivelled, as in the latter disease, but, on the contrary, were swollen; these appearances still continue, now almost two years. Mild fomentations were employed, with the foot bath, to which mustard and horse radish were afterwards added. Anodyne liniments were used, as were warm and cold applications, but all with the unhappy effect of aggravating the disease. All sorts of anodynes were tried, and the whole of them disagreed, making the stomach sick, and causing severe headache. The bowels all this time (six months) were obstinately confined, and the most active purgatives, and in large doses, failed sometimes to produce feculent evacuations. At the end of this period, she was attacked with pain of the right side, between the lower ribs and crista of the ilium, extending forwards to the abdomen; this prevented her from taking carriage exercise and walking, or even moving about. Leeches were applied for its relief, followed by fomentations, anodyne liniments, and blisters, which had the effect of producing metastasis to the chest, causing a sense of suffocation, which is always relieved by æther and volatile aromatic spirit, but returns again to the side, and when very bad, she loses all power of the foot, and cannot bear it to be touched in the slightest manner, even with the top of the finger or bed-clothes; there is pain and difficulty in making water at these times particularly. She has complained for some time of pain along the spine at different points, to which leeches and blisters have been applied, along with cupping, but with very little good effect. The catamenia became obstructed for some time, apparently with no injury to her general health, and they have returned without any improvement of it. She has tried colchicum, tonics in every shape, camphor, quinine, &c., &c., without the slightest benefit. The nitræ argenti, combined with pil. rhei comp. appears to agree better with her than any other medicine, keeping her bowels free without much pain; it is now, however, beginning to be inert. All through the disease there has been the greatest possible difficulty in keeping the bowels open. Lavements give violent pain when being thrown up, and during their operation; and in like manner purgatives given by the mouth produce the same distressing effect. The head latterly becomes painful every night, and sometimes

continues so through the day, attended with great thirst. With all this complication of symptoms, she has at times a tolerable good appetite, and to a common observer looks healthy and well, yet the pain in the side and foot is very distressing, as is the obstinate constipation of the bowels, which resists almost every attempt at keeping them in a soluble state. The right foot has for some time assumed the same appearance as the left, but is not quite so bad; the hands too have been slightly affected. This young lady was at the sea side for three months, and used the tepid shower bath, but not with any beneficial result.—I omitted stating, that fomentations and warm applications render the pain intense. I have suggested a trial of inspissated ox-gall.

BONY TUMORS.—Mr. Jonathan Toogood gives us two cases:—*Case 1.* A servant of Mr. George Baker, of Cannington, a remarkably strong woman, twenty-one years old, consulted me on account of a tumor occupying the whole space behind the left ear, which had assumed its shape, and extended to the angle of the jaw. It was so firmly attached to the skull that it was only by fixing her head, very firmly and grasping the tumor with both hands, I could perceive the slightest lateral motion—so slight, indeed, that another surgeon, who saw the patient with me, thought it quite immovable. We both thought it bone. I made an incision through the scalp, which proved that our opinion was correct; but it was so closely bound down by the pericranium, that it became very difficult to detach any part of it; at length, however, I succeeded in doing so all around the base, and found that it was connected with the mastoid process by a bony attachment. With considerable difficulty I got a strong spatula between the skull and the tumor, and holding the tumor firmly with one hand, whilst I was endeavouring to raise it with the spatula in the other, the patient, who had been very ungovernable during the operation, made a desperate effort to get away from me, by which the tumor was torn from its attachment. It proved to be a solid piece of bone, weighing three ounces. The operation was a difficult one, and attended with a good deal of hæmorrhage. The skull was smooth under the tumor, except at the mastoid process, which was rough, and appeared diseased. There was no exfoliation, and she recovered in a fortnight.—*Case 2.* In this case the tumor was situated on the metacarpal bone of the ring finger of a boy of sixteen, and had grown to such a size as not only to render the finger useless, but to impede very considerably the motions of the hand. As all treatment had been unavailing, the removal was recommended, which was effected in the following manner:—An incision was begun at the carpus, by which the middle and little fingers were separated from the diseased ring finger, whose metacarpal bone was turned out at its articulation at the carpus. Notwithstanding the numerous vessels which were divided in the operation, none required ligatures; the parts were brought together and retained by plaster and bandage, and speedily healed.

SCARLATINA MALIGNA.—From several distinct and highly respectable sources, says Dr. Watson, *chlorine* has been strongly pressed upon my notice, as a most valuable remedy in the severest forms of scarlet fever. My informants have stated, that whereas they formerly dreaded to be summoned to cases of that disease, they now, having had experience of the virtues of chlorine, felt no misgivings in undertaking its treatment. Since these representations were made to me, I have not had opportunities enough of trying this drug to enable me to speak confidently of its sanative

power; but I shall certainly employ it in future. I presume that its disinfecting properties may, in part, account for the good it does. It probably deprives the foul secretions of their noxious quality.—The formula is two drachms of the chlorate of potass dissolved in two ounces of hydrochloric acid, previously diluted with two ounces of distilled water. The solution must be put immediately into a stoppered bottle, and kept in a dark place.—Two drachms of this solution, mixed with a pint of distilled water, constitute the chlorine mixture; of which a table spoonful, or two, according to the age of the patient, may be given for a dose, frequently.—We must not omit, in this, as well as in the other forms of the complaint, to pay attention to the state of the bowels, and by no means to allow them to remain costive.—I have seldom used blisters in this disease; but an experienced physician has lately told me that when applied *early* to the neck and throat, they appear to render the affection of the fauces mild.

PULMONARY CONSUMPTION.—Mr. Gilbert gives the following case of cured consumption among a number more:—“W. M., aged 45, by trade a coppersmith, born of healthy parents had been in the enjoyment of sound health till within the last twelvemonths—his chest was well developed, muscles large, dark hair, and hazel eyes; in fact, the entire appearance of this man repelled any idea of his being naturally disposed to pulmonary consumption. For some years he had addicted himself to intemperate habits, such as dram-drinking, late hours at night, exposure to wet and cold. In consequence, his appetite began to fail him; his muscular strength was much impaired; and for the last fifteen months he was attacked with cough and profuse expectoration; for this he was bled, blistered, and took aperient and expectorant medicines, according to the account of the medical attendant who had charge of him. The cough, however, still continued, with the expectoration: he also had night-sweats, and the other symptoms of hectic.—At this time I was called in, and I found him in the following state:—considerable emaciation; pulse frequent and rather weak; dyspnoea, more especially on ascending a height; can rest equally well in any position; sleeps badly at night; cough very troublesome, and expectoration profuse. On applying the stethoscope I detected distinct pectoriloquy under the right clavicle, with cavernous respiration; dulness on percussion over the lower portion of the right lung, with puerile respiration in the superior portion of the left lung.—Here the indications of cure were obvious—the size of the cavity in the right lung was of small extent; some tubercular infiltration in its lower part. I employed counter-irritation forthwith, first by means of tartar-emetie ointment, and afterwards by a succession of small blisters; attended carefully to the state of the digestive organs; had the patient removed from London to a more healthy situation near town; prescribed a strict regimen, with such medicinal means as might tend to soothe the cough and facilitate expectoration; gave him an occasional opiate at night. At the end of about six weeks there was perceptible improvement in all the symptoms; the patient had evidently gained flesh and strength; cough was considerably diminished, and with it the expectoration; his appetite was restored; the stethoscopic signs were much improved, no pectoriloquy; there was, however, an absence of the vesicular respiratory murmur in the site of the cavity, over a small extent of surface with dulness on percussion in the same place. After another month the patient

was able to resume his ordinary occupation, and still continues free from cough, or any uneasiness with respect to the functions of the respiratory organs. He rigidly adheres to the strict regimen which I originally prescribed for him, and is much improved in every way; in fact, he states that his health is now better than he has felt it for the last six years.—*Remarks:* Here was a case well calculated to shake one's faith in the necessity of ulceration for the elimination of tubercular depositions from the lungs. Such elimination was evidently owing to the effects of the well-regulated employment of counter-irritation. We leave it as a problem, for the solution of the physiological pathologist. How was the tubercular deposition, which evidently existed through a considerable portion of the right lung, removed? We must not reject the advantages of a therapeutical agent, because we cannot account for its *modus operandi*.

BLACK PITCH IN HÆMORRHOIDS.—Mr. Wardleworth, of Manchester, strongly recommends, after abating the inflammation attending this malady, the internal administration of black pitch.—The following is the formula:—Take of black pitch, one drachm; powdered gum arabic, half a drachm; well mixed together, and divided into twenty pills, two of which are to be taken every night; its action upon the bowels is that of a gentle aperient, thereby rendering the pitch a most desirable remedy in piles. As a remedial agent in affections of an indolent character situated in the vicinity of the rectum, black pitch has a decided superiority over *Ward's paste*; for, on comparing the number of cases of fistula treated with *Ward's paste*, and black pitch, the latter had the advantage both as regards the number of cures and the time in which they were accomplished.—In pregnancy and a highly irritable state of the bowels the pitch is not to be used, except combined with opium.

MEDICAL NEWS.

RATABILITY OF HOSPITALS TO ASSESSED TAXES.—The surveyor having assessed the Fever Hospital, Battle Bridge, for window tax, the case came before the Commissioners of Assessed Taxes, who relieved the premises from the charge. The surveyor being dissatisfied, the case was submitted to Judge Patteson and Judge Williams, who, we are happy to say, confirmed the decision of the Commissioners. The surveyor relied on rule 8, of 48, Geo. III., c. 55, which clearly does not apply. The Commissioners were influenced by case two, (exemptions) in the same act.

MORTALITY.—From a paper by Mr. Edwards, secretary to the Legal and General Assurance Office, we learn that up to the age of 55 years, the mortality increases at the constant rate of three per cent. for each advance of one year in age, and that after the age of 55, the mortality increases at the constant rate of 8 per cent. for each year.—Another important point shewn is, that at any given age, the mortality of members who had been admitted at a period more than five years distant is much greater than the mortality of members who had been admitted at a period less than five years previous. This increase in the Equitable is 50 per cent!

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The Introductory Address, on the opening of the School for the Session 1842-43, will be delivered by Dr. GOOLDEN, on Saturday, October the 1st, at 12 o'clock.

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THE SUMMER SESSION will commence on Monday, May 1.

BOTANY and VEGETABLE PHYSIOLOGY; Mr. Rootsey and Dr. W. B. Carpenter.

FORENSIC MEDICINE; Dr. Kay.

CHEMICAL TOXICOLOGY; Mr. Herapath.

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Materia Medica and Therapeutics, by Mr. Drennan.

Chemistry, by Mr. MORLEY and Mr. WEST.

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Botany, by Mr. WILKINSON, in the Summer Months.

Forensic Medicine, by Dr. PYEMONT SMITH, in the Summer Months.

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I have worn for some time the new patent boots, called Impilia, with much comfort and satisfaction; I find the boots possess great elasticity, evenness of pressure, and I am enabled to walk a greater distance without inconvenience.

J. G. ANDREWS.

April 20, 1842.

From Anthony White, Esq., Parliament-street, one of the Council, and late President of the Royal College of Surgeons.

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ANTHONY WHITE.

April 6, 1842.

From Dr. Paris, of Dover-street, London.

I have examined and worn with comfort and satisfaction shoes constructed with intermediate soles of feet, to which you have bestowed the name Impilia. They undoubtedly possess an elasticity and capacity of adaptation to the form of the foot not possessed by ordinary shoes, and they have the rare merit of not creaking. They are, moreover, warm and dry.

J. A. PARIS, M.D.

From Dr. Roots, Russell-square, London.

Dear Sir,—I have now worn for some time a pair of boots with intermediate soles, which you term Impilia. They are admirably adapted for the ease and comfort of tender feet, and the elasticity of their tread is very pleasant. I can with confidence recommend them for general use, while for medical men they possess the very rare advantage of not creaking, and consequently are so desirable in a sick room.

H. S. ROOTS, M.D.

W. Baker, Esq.—April 25, 1842.

From Dr. Hodgkin, Lower Brook-street, London.

Having not only examined, but put to the proof of experience, the patent soles invented by my friend Wm. Baker, M.R.C.S., and termed Impilia, I have no hesitation in saying that they are a very decided improvement on the common method of construction. They are not only much more agreeable to the sole of the foot, but promote a warm and uniform temperature as well as freedom from damp, whether entering from without or derived from the feet.

THOMAS HODKIN, M.D.

30—4, 1842.

From John C. Taunton, Esq., M.R.C.S., 48, Hatton-garden.

I have worn with satisfaction the boots with the intermediate soles of Impilia. They are worn with more comfort, adapt themselves better to the form of the foot, and are impervious to wet.

JOHN C. TAUNTON.

May, 1842.

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THE MEDICAL TIMES

A Journal of English and Foreign Medicine and Medical Affairs.

No. 157. Vol. VI.

LONDON, SATURDAY, SEPTEMBER 24, 1842.

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ORFILA'S LECTURES ON ARSENIC.

Containing an Account of the different Operations performed upon the Body of Laffarge.

Collected and Translated by JOHN DAL PIAZ, Pharmacien and Laureate of the School of Paris.

LECTURE VI.

GENTLEMEN,—In my last lecture, when exhibiting my modification of Marsh's apparatus I explained to you the method for obtaining arsenical stains and a metallic ring at the same time, and from the same operation, I made known to you by what characters you might distinguish arsenical stains from all others, particularly from those produced by carbonized animal matter. These latter stains I observed were very little soluble in nitric acid, and traces of them may be perceived even when the acid has remained upon them for several hours. To prove the truth of this last assertion I exhibit to you this plate covered with the said stains which have been in contact with nitric acid during the last twelve hours; nevertheless they have not yet disappeared. Finally, I proved to you the possibility of producing stains by the action of an inflamed jet of pure hydrogen upon a common pipe-clay plate. These latter stains cannot be mistaken for those of arsenic, for they are devoid of brilliancy and not in the least degree sublimable.

I ought now to talk of antimonial stains; but I prefer giving their history when treating upon that metal; nevertheless I cannot proceed any further without saying a few words of those resulting from a mixture of antimony and arsenic. I am induced to speak particularly of those stains, in consequence of a letter I have received, in which I am asked how I could distinguish stains composed of zinc and arsenic. I must confess this never struck me before; indeed, the letter has arrived quite *a propos*. Immediately after its perusal I began to think of the means to be adopted in such a case, and imagined the following mode of proceeding, which is equally applicable to a mixture of arsenic and antimony.

In the first place I submit the stains to the action of a few drops of chlorhydric acid, which dissolves the zinc or the antimony without acting upon the arsenic, which may be seen floating upon the surface of the liquid; this being separated, the acid solution is then evaporated to dryness; the residue thus obtained, is a chloride of zinc, or of antimony. The latter of these compounds, when acted upon by distilled water, occasions a white precipitate of oxy-chloride of antimony, whilst the former dissolves without any action whatever. Finally, either of these chlorides may be recognised by the methods I have stated when speaking of salts in general. The arsenic separated from the acid solution may of course be detected by transforming it into arsenic acid and testing this by nitrate of silver, which affords a brick-red precipitate as before stated.

Gentlemen, the history of stains is not yet completed; it can only be when all the metals have been studied. I shall now consider the numerous

objections which have been offered to our new mode of operating, the most important of which, as I have before stated, were proposed by myself. I commenced by asking myself, whether the poison might not be contained in the tests employed instead of in the suspected matter. Secondly, whether the arsenic found in a corpse might not be derived from the earth in which it was deposited. The last objection, much more difficult to refute, but which has seldom or never occurred, was the following:—Suppose an individual to inject a lavement containing arsenious acid into the rectum of a dead person—or even introduce the poison in the solid state for the purpose of creating a belief that the deceased has died from the effects of arsenious acid. Imagine this to have actually occurred. The body is interred, and about a fortnight afterwards the person who has introduced the poison, excites a report, that the deceased has been poisoned. The legal authorities order the body to be exhumed, and arsenic is found in the liver, the spleen, the kidneys, &c.

This is what I term the question of imbibition, upon which I shall have much to say, for it is a question extremely delicate. I shall proceed now to consider the first of these objections, which is concerning the

Impurity of Tests.—In the first place, what tests do I make use of?—Zinc, water, sulphuric acid nitric acid and nitrate of potash.

Nothing can be easier than to prove the purity of the first three; this may even be effected by a single operation; let them be introduced into Marsh's apparatus, and if the disengaged gas does not yield a trace of arsenic, after one or two hours, it may reasonably be concluded that neither of these substances contained the poison; if the contrary occurs, these tests must be replaced by others, or each must be changed alternatively until no more arsenic is produced; in this case you may be certain the substance last exchanged was arsenical. For example, suppose arsenical stains were produced from a mixture of zinc, water, and sulphuric acid; you then will wash the apparatus and replace an other quantity of the same zinc and water with fresh sulphuric acid: if in this last case no stains are produced, you may reasonably conclude the first sample of sulphuric acid contained arsenic. The same may be said of the zinc and water: only in all cases care must be taken not to operate with too strong a flame.

Purity of Zinc.—It has been erroneously asserted that all commercial zinc contains arsenic. Unfortunately this idea has prevailed, in great measure from using chlorhydric acid instead of the sulphuric, when operating with Marsh's apparatus. In this case zinc stains are generally formed by the decomposition of the chloride of this metal. With sulphuric acid no stains are produced, provided the flame is not at too great a length; such at least is Monsieur Dumas's opinion. In a conversation with him a short time since, I asked why I never obtained those stains so much talked of? and he replied, it was solely on account of my using a very short flame.—The commission of the Royal Academy of Sciences, have made many experiments to prove the truth of my assertion with respect to the non-arsenical state of commercial zinc: nevertheless, should you wish to be still more certain of the purity of the zinc to be used, you might have recourse to the following procedure. Fuse the metal in a Hessian crucible, and add, at intervals, small portions of nitrate of potash; the mixture must then be continually stirred, until it becomes perfectly homogeneous. When cool, dissolve the mass in pure distilled water; filter, and evaporate to dryness. Finally, add sulphuric acid to the residue, and submit it to the action of Marsh's apparatus. The object of this operation is to convert all the arsenic, which may be in combination with

the zinc, into arsenic acid by means of the oxygen emitted during the decomposition of the nitrate of potash; the arsenic acid thus formed immediately combines with a portion of the potash, to form a soluble arseniate of potash. Consequently when water is added, it is dissolved, and being a fixed salt, it is not affected by the heat made use of to evaporate the liquid, but remains in the capsule. Sulphuric acid is then added to dissolve the residue, and at the same time to liberate the arsenious acid which is then immediately detected by Marsh's apparatus.

Purity of Water.—In all our operations we are under the necessity of making use of water; it should always be distilled and afterwards tested by Marsh's apparatus, taking care to use for that purpose perfectly pure zinc and sulphuric acid. If no stains are then produced, its purity, as far as arsenic is concerned, cannot be doubted. Let us now speak of the

Purity of Sulphuric Acid.—This acid as usually found in commerce, may sometimes contain arsenious acid; this, however, occurs very seldom. The presence of this poison may be easily accounted for in the following manner.* Sulphur is sometimes obtained from the decomposition of iron pyrites, which contain arsenic; the sulphur volatilized during the operation associates itself with a certain portion of the arsenic, which is volatilized at the same time; consequently when this sulphur is used for making sulphuric acid, we have formed at the same time arsenious acid.—Marsh's apparatus is certainly the most delicate means for detecting arsenic; nevertheless, when the quantity of poison is not extremely small, sulphuretted hydrogen may be sufficient. In making use of this last re-agent, it is only necessary to pour the acid into a bottle filled with sulphuretted-hydrogen gas, and agitate it for a few seconds, there will be immediately formed a yellow precipitate of sesqui-sulphuret of arsenic, from which the metallic arsenic may be easily extracted.—Another objection has been offered; it has been said: when testing your re-agents by Marsh's apparatus, small quantities only are employed; but in medico legal researches you are sometimes under the necessity of employing several kilogrammes of sulphuric acid, nitrate of potash and nitric acid,

* Sulphuric acid of commerce is never found pure, it seldom contains arsenic, generally sulphate of lead and sulphate of lime, which can both be easily separated by distillation. Sulphuric acid contains also other compounds which cannot be separated by distillation; these are compounds of oxygen and azote; and we know that there exists a combination of binoxide of azote with sulphuric acid, which volatilizes at the same temperature as sulphuric acid itself; very probably nitrous acid forms another volatile sulphate of a similar nature. The German chemists have taken advantage of this last impurity to obtain pure nitrogen, and at the same time to purify the sulphuric acid; this is effected by boiling it upon a certain quantity of sulphate of ammonia; the ammonia is decomposed, its hydrogen unites with the oxygen of the azotic compound, to form water, whilst the azote of both compounds escapes in the form of a gas, which may be collected in the usual way. Messrs. Pelletier and Caventou have discovered brucine to be a most delicate test for the smallest quantities of nitrous or nitric compounds in sulphuric acid; for when these compounds are present, the liquid assumes a fine red colour; upon the addition of brucine with pure sulphuric acid, a yellow colour is only produced. M. Guerin has proposed the use of narcotine for the same purpose; it is a still more sensible test than brucine, particularly when the acid has been heated by the addition of a small quantity of water.—*Pelouse's Lecture, Dec. 7.*

and if the poison exists in these re-agents in any minute proportion, it is only by using such large quantities that it can be detected.

To refute successfully this last objection, I must previously speak of the

Purity of Nitric Acid.—Never can nitric acid contain arsenious or arsenic acids, provided it has been distilled upon nitrate of silver. Suppose we had to distil nitric acid containing arsenic acid, this would immediately form arseniate of silver, which being a fixed salt would remain in the bottom of the retort.

But what would occur, if instead of arsenic acid, we had arsenious acid? In this case we should again have arseniate of silver formed; for as soon as the nitric acid becomes heated, the arsenious is transformed into arsenic acid, which immediately combines with the silver.

We conclude from this, that in all cases of medico-legal research, the nitric acid made use of, has been distilled upon nitrate of silver. Nevertheless, I must observe, I never have yet been able to detect the presence of arsenic in any of the numerous specimens of nitric acids I have examined.

The absence of arsenical compounds in nitric acid thus distilled being once established, I must now direct your attention to a mode of procedure, by which we ascertain by one operation the

Purity of large quantities of Nitrate of Potash and Sulphuric Acid.—I have already observed that nitrate of potash has never been found to contain any arsenical compound; nevertheless, in the place of assertions let us substitute facts. I shall make two experiments at the same time, that we may compare one with the other.—Here are two large porcelain capsules; into each I introduce one kilogramme of nitrate of potash, and half a kilogramme of sulphuric acid perfectly pure, but to the mixture contained in the second capsule, I add two drops of our solution of arsenious acid. In both cases there is produced a great quantity of white fumes, occasioned by the disengagement of nitric acid. The two capsules are then to be heated until no more nitric and nitrous acids are evolved, when they will be allowed to cool, and a little distilled water being afterwards added to each mass of salt thus obtained, they must be once more heated to expel the last portions of nitric and nitrous acids; we shall have then in both capsules a mass of bisulphate of potash, plus a liquid of a certain consistence, which must be poured off and laid carefully aside; distilled water is then added in sufficient quantity to dissolve the most soluble compounds contained in the mass of salt, which, it is necessary to add, should previously have been bruised. The solution thus obtained must be mixed with the liquid at first poured off, and this mixture afterwards submitted to the action of Marsh's apparatus, which will certainly detect the arsenic, if any existed in the kilogramme of nitre.—Should stains of arsenic be obtained from a sample of nitre, that must of course be discarded, and other sorts be tested until negative results occur. But I again repeat, I have never been able to find arsenical nitre in commerce, although I have operated upon numerous specimens.—I dare say you will be able to witness the results of these two experiments before this lecture is over; in the mean time I shall begin upon another question, that of

Church Yard Soils.—Arsenic might be extracted from the earth of a burial-ground. In this case what medico-legal consequences are to be inferred?—In several departments of France, farmers are in the habit of preparing their wheat with arsenious acid, previous to sowing it. It is, therefore, not very unreasonable to suppose that a body after being five or six months under ground, might be in contact, in some of its parts, with arsenical earth, and consequently imbibe, or take up in one way or other, a portion of the poison; but fortunately such cannot be the case.—When arsenious acid is in contact with the soil, it combines with the ammonia always contained, forming an arsenite of ammonia; such a reaction may even take place when the soil is merely damp. But the arsenite of ammonia thus formed, is soon brought in contact with calcareous matter which decomposes, and

forms with it an insoluble arsenite of lime.* I think this is sufficient to explain, why some portions of the same soil are arsenical whilst others are not. I was very much surprised when, for the first time, I found what I have just stated, and to justify my ideas upon the subject, I sent for fifty kilogrammes of earth from the *Département de la Somme*, where, as I before mentioned, a great quantity of arsenious acid is used for preparing the wheat. In this earth I found an abundance of arsenite of lime; I was convinced also, that this compound was rapidly formed, for in a sample of earth sent to me only a fortnight after the sowing had taken place, I found arsenite of lime, but not an atom of arsenious acid.

Can this insoluble arsenical compound enter a body when it must first pass through the coffin and the clothes in which the corpse is enveloped? Such a thing is certainly impossible; it is contrary to common sense, even to suppose it. Nevertheless, see how powerful the imagination of some people is; in the memoir of Monsieur Raspail, I read the following sentence:—"A centimeter square of green coloured paper placed upon the earth which covers a coffin will produce arsenic in sufficient quantity to impregnate a body from head to foot."

This certainly seems a bold assertion, and naturally leads me to inquire, what is a centimeter? and what can this powerful arsenical compound be, by which the paper is coloured? A centimeter is not quite half-an-inch, and this half-inch square of paper is coloured by arsenite of copper (or Sheele's green) which is insoluble, and cannot be supposed to contain more than a ten-thousandth part of a grain of the poison upon its surface. Suppose even this arsenite were to detach itself from the paper, is it possible to believe it will take its course in a direct line, passing through the coffin, the shroud, and finally, entering the body would "impregnate it from head to foot." This would really be allowing our imagination to go too far! I must now tell you I have made experiments by which I am induced to draw quite opposite conclusions.

I buried a human liver, without placing it in a box, in fact, without any covering whatever; the earth in which it was placed had been previously moistened with a solution of arsenious acid and for five or six days after, I poured some of the solution upon the earth which covered it. After a short time I exhumed the liver and having subjected it to a careful analysis, I was not able to detect the slightest indication of arsenic. This result may be easily accounted for; the arsenical solution does not proceed downwards in a straight line, but diffuses itself in all directions forming as before stated, arsenite of ammonia and afterwards arsenite of lime, which is insoluble.

Suppose now a certain quantity of arsenious acid had come in contact with the liver, the external parts only, would have been impregnated with the poison, for without life, no absorption can take place; consequently, in such a case, no arsenic would be found in the interior parts of this organ.

Monsieur Devergie states, he has obtained contrary results; but I beg to observe, that his mode of operating was quite different to mine; he placed the liver, surrounded with earth, in a glass vessel; in this case, it was impossible for the poison not to come in contact with the liver. The solution must necessarily proceed downwards, almost in a straight line; it then escaped by a hole pierced through the bottom of the vessel.

Gentlemen, I have now arrived to another important question, which I term

The question of Imbibition.—I am really very much surprised that scientific men, have not been induced to give it more attention, since it is a question involving very strong objections.

What are the necessary conditions under which imbibition can take place? Permeable tissues, and a liquid; consequently, if arsenious acid be introduced in a solid state, imbibition would be slowly effected, and not far extended. But, if the

* The sulphate of lime contained in the soil, finds arsenite of ammonia, and a double decomposition takes place; the result of which is the formation of sulphate of ammonia, plus, insoluble arsenite of lime.

poison be in solution, for example, if a lavement had been administered to a corpse, we should find after a certain time, the liver, the spleen, the kidneys, &c., to be infected.

We know that a caustic poison injected into a subject twenty-four hours after death, will produce no irritation in the organs, whilst if one hour only has elapsed an irritation is produced, but much less intense than would occur if the individual was living. There is besides, this peculiarity, in cases of imbibition, the poison extends with great uniformity; on the contrary, when absorbed it is in every part at the same time. It is therefore evident if we suspect imbibition to have taken place, we must, in the first place, examine attentively the viscera, for the purpose of following the course taken by the poison; we must also analyze the organs after a particular manner; we must in fact, separate the external and internal parts of the liver, and ascertain whether the poison has extended to any depth, or whether it only remains upon the surface; if this last results, we may safely infer, that imbibition alone has taken place and not absorption.

I now present to you the body of a woman in which a solution of sulphate of copper has been injected. I have chosen this salt on account of the blue colour it communicates to the parts with which it is in contact; thus offering a striking proof of the uniformity with which the poison is imbibed.

The solution injected into the stomach has penetrated the tissues of this organ, and proceeds gradually to imbibe other permeable parts, affecting principally, their inferior surface, owing to the inclined position of the body. You may observe the inferior parts of the stomach, the liver, the intestines, the mesentery and the lungs, are blue, whilst the superior parts are not the least changed in appearance. It is almost useless to say that by analysis we should obtain copper from the parts which are coloured, and none from the others; the same would result if arsenious acid had been injected, only, the effect would not be so palpable to the sight.

Suppose now dry arsenious acid had been introduced into the rectum of a corpse; imbibition, in such a case, would be slowly effected, and it would be necessary to observe the digestive canal with the greatest attention. If the poison has been introduced two or three hours after the death of the individual, there may be seen in the parts surrounding the poison, signs of inflammation, and even a real ecchymosis; but the inflammation extends no further.

This poison introduced in the same way during life, would produce a strong inflammation extending the whole length of the digestive tube; eschars may even be produced if the poison is introduced in sufficient quantity.

It follows from what I said respecting imbibition, that in all such cases we must be guided by physiological observation as well as by chemical proofs. I must however, admit it would be very difficult to take advantage of these, if the body was in a putrified state; it would then be necessary for the medical investigator to inquire into the symptoms observed during the life of the individual; these, with the result of the investigations of an acute magistrate might perhaps together, elicit the truth of the case.

Gentlemen, before we part I wish to call your attention upon the results of the two experiments, not long since commenced, and continued in your presence. From the Kilogramme of nitre to which only two drops of the arsenical solution were added, we now obtain stains well characterised whilst from the other kilogramme of nitre nothing but water is produced and deposited on the porcelain capsule, and I defy any one to obtain the slightest indication of stains even if the operation be continued for one hour longer.

THE DAGUERRETYPE.—A. M. Isenrig, a painter, living at Munich, has announced that he has discovered a process, whereby, through the Daguerreotype, he can depict all the objects of nature, with the brilliancy of their colours, so as to bear comparison with the finished productions of the first artists.

COURSE OF CLINICAL LECTURES ON PNEUMONIA.

Delivered at the Hotel-Dieu, by Professor CHOMEL.

LECTURE XXV.

Simple Chronic Pneumonia.—The symptoms of chronic pneumonia are as follows: The inspiratory bruit is diminished in proportion as the induration of the lung is more marked or extended and uniform. The expiratory bruit, on the contrary, becomes stronger and more prolonged, according as the induration is more extended and less uniform: so that it diminishes when the induration of the parenchyma occupies uniformly the whole substance of a lobe. The respiratory bruits are remarkably dry and hard. We find bronchial respiration, bronchophony, and bronchial cough. The sounds of the heart are readily transmitted through the indurated part. Percussion gives a more or less marked dulness. On inspection of the thorax we sometimes discover a diminished movement in the ribs, and a depression of the part corresponding to the indurated portion of the lung. The functional signs are an internal sensation of constriction and uneasiness, an habitual cough, and expectoration similar to that of chronic bronchitis. The constitution of the patient is not very sensibly weakened, and there is usually but little hectic fever. In chronic induration, or carnification of an entire lung, the respiratory bruit is quite absent, although the movements of the thorax are performed almost as perfectly as in the sound state. We then sometimes hear, after the inspiratory movement, a slight bruit—named by M. Fournet the *bruit of pulmonary compression*, which appears to result from the pressure on the condensed pulmonary tissue of the column of air which is unable to penetrate into the bronchial ramifications.

Complicated Chronic Pneumonia.—Chronic pneumonia is most usually combined with various lesions of the lungs, especially with tubercles and dilatation of the bronchi. The grey induration surrounding *crude tubercles* is the cause of the diminished sonorousness beneath the clavicles, as well as of the alterations in the inspiratory bruit, &c.; hence assisting us in the diagnosis of tubercular disease at a period when it would be impossible to distinguish it without the aid of chronic inflammation. In like manner induration of the parenchyma forming the parietes of the tuberculous cavern easily transmits the sounds produced within it; hence the facility of distinguishing gurgillement, cavernous respiration, &c., in these cases. When the parietes of a cavern containing nothing but air, are thin, dense, and flexible, resembling a piece of leather, we hear what is described by M. Fournet as the *bruit de froissement*, similar to the crackling of new leather. When less marked, this bruit resembles the slight and sharp sound produced by blowing on dry transparent paper. The grey induration surrounding *dilated bronchi* renders more marked the bronchial souffle and bronchophony, which usually characterize this affection; in some cases, also, the bronchial respiration assumes the cavernous character, and bronchophony becomes transformed into pectoriloquy.

Differential diagnosis of Chronic Pneumonia.—Chronic Bronchitis is easily distinguished from simple chronic pneumonia, by the absence of dulness, by the preservation or augmentation of the vibration of the voice, &c., as well as by the character of the cough and expectoration. Chronic pleurisy, with effusion, may be diagnosticated by the greater dulness and resistance to the finger, by the change in the position of the liquid according to the movements of the patient, and especially by the dilatation of the corresponding part of the thorax. In chronic pneumonia the dulness is not displaced, and the corresponding part of the chest is almost always depressed. Again, generally speaking, pleuritic effusion is seated at the posterior and inferior part of the thorax, whilst chronic pneumonia may occupy all regions of the lung, and more frequently attacks the summit of the organ than other parts.

Tubercular phthisis in the second and third stages may generally be with facility distinguished from chronic pneumonia. But in the first stage the

symptoms of the two affections are almost exactly similar; we must, then, take into consideration the rarity of chronic pneumonia, as compared to tubercular phthisis; the usual seat of tubercles at the summit of the lungs, and the variable position of simple induration of these organs. In the first stage of phthisis, also, we hear a kind of dry crackling co-existing almost exclusively with inspiration, a crackling which quickly assumes a humid or cavernous character. Again, the frequency of hemoptysis in tubercular disease, the fever with nocturnal sweats, the debility and emaciation of the patient, his age, hereditary predisposition, as well as the successive appearance of the symptoms characterizing *ramolissement* of the tubercles, the diarrhea, &c., will, in general, allow an easy diagnosis between the two affections.

Simple chronic pneumonia may be confounded with *solid masses*, as *scirrhus*, &c., developed in the lungs or in the pleuræ. These tumours, however, when large, dilate the corresponding part of the thorax, and the various râles and other sonorous phenomena, already spoken of, are totally wanting. The absence of these latter symptoms will also distinguish this affection from induration of the portion of the lung bordering on the heart or the aorta, which, by serving as a conductor to the pulsations of these organs, might simulate an *aneurismal disease*. The progress and duration of the affection, as well as the age of the patient, will also assist in clearing up the diagnosis.

PROGNOSIS.—In considering this subject we first come to the *circumstances relative to the disease itself*. These are, 1st, *Seat, Extent, and Degree*:—Double pneumonia is always more grave than that which is confined to a single lung. Right pneumonia, again, is more dangerous than that of the left side. Pneumonia of the summit of the lung is generally regarded as more unfavourable than that of other regions, the base in particular. This circumstance is undoubtedly owing to the greater predominance of tubercles in the upper part of the lung, and which, from the presence of inflammation, become hurried into a state of suppuration. Deep or central pneumonia is dangerous from its tendency to remain latent. Disseminated pneumonia is one of the most favourable forms in the adult; while in the child, on the contrary, it is excessively dangerous, more particularly from the complications attending it. The danger of a pneumonia is generally, *ceteris paribus*, in proportion to its extent: that occupying a whole lung being much more grave than when confined to a single lobe. With regard to the *stage*, it is of course evident that there are more chances of cure in the first than in the second stage, and so according to the duration of the affection. I have never known an authentic case of cure after the pneumonia had reached its third stage.

Symptoms.—Auscultation and percussio, by revealing the seat and extent of the pneumonia, and the permeability or impermeability of the pulmonary parenchyma, aid us most powerfully in our prognosis. Of the functional symptoms, *pain* is of but secondary importance; in some favourable cases it is very acute, while in the most fatal ones it is not unfrequently, totally absent. *Dyspnea* is a much more sure criterion; in general we may say that the gravity of the disease is in direct proportion to the dyspnea. Cough when frequent and violent aggravates the pain, and consequently the prognosis. Expectoration is a valuable symptom. Having, however, in our former lectures dwelt so fully on this subject, we shall not now recur to it. The absence and especially the suppression of the expectoration is a very inauspicious sign. Frank, however, speaks of having seen a considerable number of pneumonias terminate favourably where the expectoration was wanting, but the place of which was supplied by a deposit in the urine, and by copious perspirations.

The general symptoms are most important in forming our prognosis of the disease; especially in those cases where, after one or more bleedings, we suddenly find a remarkable contrast between the local and general symptoms of the affection. In some instances, the local signs remaining the same, we see the functional and general symptoms amend, the respiration become less constricted, the pulse less frequent, &c., thus establishing the existence of a real

improvement. At other times, on the contrary, after bloodletting we find the dulness of the lower part of the affected side rapidly diminish; hence we might be induced to believe that great amelioration had taken place; but the augmentation of the dyspnea, the acceleration of the pulse, &c., will quickly undeceive us, and show us that the pneumonia has not diminished, but that the pleuritic effusion bathing the base of the inflamed lung has been suddenly re-absorbed, perhaps under the influence of increased inflammation. The pulse is, however, a sign of but secondary importance; when large, strong and equal, it should not inspire us with too much confidence, nor need its opposite state excite unnecessary alarm; but its extreme frequency, irregularity, and inequality are generally fatal omens. A hard and wiry pulse, with great heat and dryness of the skin, is a very unfavourable sign; also, when frequent at first, it afterwards becomes normal, this change is usually depending in the adult, on great depression of the powers, and announces a rapidly fatal termination. This, however, is not so much the case with the old man. Delirium, as also *insomnolency*, are generally considered very unfavourable symptoms. The examination of the face is of great importance in the prognosis of pneumonia. A violet colour of the face, or a yellowish tint, similar to that observed in cancerous affections are very alarming phenomena; the first, by indicating extreme difficulty in the respiration; the second, by leading us to suspect suppuration of the lung and absorption of the pus into the circulatory system. We pass over some other considerations, such as *relapses, complications*, &c., which, of course, must exercise a more or less fatal influence over the progress of the disease, from the state of debility in which the patient is found, and next come to.—

The Circumstances Relative to the Individual Affected.—Age exercises a remarkable influence over the mortality of pneumonia. We may establish in this respect two scales, the one ascending, the other descending, but both commencing with the age of 6. In the first, the pneumonia becomes more grave according as the patient is older; in the second, on the contrary, the disease is more serious in proportion as the patient is younger. But between the ages of 6 and 12, pneumonia is usually remarkably benign.—Sex. Pneumonia is, *ceteris paribus*, much more fatal in women than in men.—Constitution. From the few data which have been collected, it would appear that strong or even weak constitutions are more favourable towards the issue of the disease than middling or doubtful ones. This is accounted for by the uncertain or wavering treatment which is adopted in the latter cases.—Temperament and *idiosyncrasy* must also be taken into account in forming our prognosis of the disease. The *habitual state of health*, and certain customs, in like manner exercise an important influence over its progress. There are lastly in the woman some circumstances which modify the prognosis of pneumonia; as menstruation, pregnancy, accouchement and suckling: all of which conditions impart a graver character to the disease.—The external influences are season, climate, peculiar conditions of the atmosphere, &c., as well as what are termed occasional causes, the power of which over the issue of the malady may be readily conceived.

ETIOLOGY.—*Predisposing Causes.*—Predisposition is a most important agent in the production of diseases. Hence, we find the same causes, in different individuals, give rise, in some to angina, in others to bronchitis, pleurisy, rheumatism, or pneumonia; while others, again, will escape disease altogether. Lastly, in the great majority of cases, pneumonia is developed under the influence of causes which entirely elude our means of investigation, and we are acquainted with but few of the conditions which favour its development. The predisposing causes of pneumonia may be divided into two classes, according as they are external, or as they belong to the individual himself. The external predisposing causes are, season, climate, locality, winds, alterations of the air, and certain professions. The internal predisposing causes are age, sex, temperament, constitution, idiosyncrasy, and race.

A few remarks will be necessary on this second class of causes; and, first, of age. On comparing the various data which have been furnished as to

the frequency of pneumonia at the different periods of life, we find that adults are much less subject than children to inflammation of the pulmonary parenchyma; pneumonias forming in adult life but a fourteenth part of diseases, whilst, in infants, their proportion varies between a fourth and a fifth. The periods of childhood most liable to pneumonia are,—1st, from one to two years of age,—2d, the thirteenth year,—3d, the first month of extra-uterine life. The epochs in adult life (or rather that which has passed childhood) most subject to the disease are,—1st, old-age, from 55 to 85 years,—2d, the period from 23 to 27 years. Thus, the maximum of frequency in the adult (properly speaking) is from 20 to 30 years of age, and diminishes in the subsequent periods, up to 60. Sex has great influence as to the development of pneumonia; the difference being nearly as 4 in the male to 1 in the female. This is doubtless owing to the opposite modes of life of the two sexes. Hence, in those countries where women work in the open air like men, and are exposed to all the vicissitudes of temperature, this difference almost entirely ceases.—*Constitution.* Hippocrates was the first to remark that robust and laborious persons were more subject than others to inflammations of the lung. The reason of this circumstance is most likely dependent on individuals of this kind being generally devoted to the more laborious callings of life, and hence more frequently exposed to cold and chills.—*Idiosyncrasy.* Some persons are so remarkably predisposed to pneumonia, that all causes of irritation, to which they may be subjected, become directed towards the lung, and give rise to inflammation of that organ.—*Race.* According to Leroux, negroes and mulattoes are much more subject than whites to pneumonia, as well as to other acute and chronic affections of the chest.

We next come to the occasional causes of pneumonia; and, first, of these, we have wounds of the lung, which, if the individual survive long enough, invariably give rise to acute inflammation of this organ. Foreign bodies introduced into the air-passages, occasionally perforate the bronchi, and becoming lodged in the pulmonary parenchyma, excite acute or chronic inflammation. Contusions and violent compression of the thorax may also be ranked under this class of causes. Prolonged dorsal decubitus, in aged or debilitated individuals, when confined to bed for fracture, paralysis, &c., not unfrequently gives rise to pneumonia in the most depending portions of the lung, (*hypostatic pneumonia*).—*Chill* is another occasional cause; it should not, however, be confounded with the commencing shivering-fit of the pneumonia, nor with that sensibility to external cold which precedes the invasion of acute diseases. The importance of this cause is, however, much contested. Some, as P. Frank, regard it as the principal agent in the production of pneumonia, while others allow it but a secondary rank. Again, the lungs being charged, among other functions, with eliminating certain deleterious substances from the circulatory system, should an arrest of this function take place, the gravest consequences will ensue to the individual. Thus, for instance, on injecting mercury into the jugular veins, we quickly find the globules of this metal disseminated in the ultimate ramifications of the pulmonary vessels, and even in the parenchyma itself, where it will have given rise to inflammation and suppuration. Similar experiments performed with gummy or oily substances have in like manner produced the same result. Some substances, as the nitric or sulphuric acid-vapour, alcohol, alum, &c. appear to have the property of coagulating the blood in the capillaries of the lung; while others, not introduced from without, but the result of some internal process, may, in like manner, give rise to inflammation. Thus, in the purulent re-absorption which takes place in the pneumonia from amputations, extensive burns, confluent variola, &c., the purulent globules reaching certain eliminatory organs, the lungs in particular, excite in them a peculiar form of pneumonia, the characters of which have been previously noticed. Is it not, also, to the introduction into the circulatory system of certain injurious substances, that we must attribute the pneumonia sometimes noticed after the desiccation of an old ulcer, the disappearance of

some herpetic disease, or of gonorrhea? The suppression of acute exanthemata is regarded as an occasional cause of pneumonia: the most probable opinion, however, is, that the virus of small-pox, of measles, of scarlatina, &c., produces inflammation of the lungs, as it more commonly determines that of the mucous membrane of the intestines in the first affection, that of the nasal fossæ and of the bronchi in the second, and that of the amygdalæ in the third; under this supposition, the same cause will produce the inflammation of the lung, and that of the skin. The rheumatic principle appears sometimes to abandon the articulations and abruptly attack the various viscera, the pleuræ and lungs in particular; hence this affection has been named *arthritic*, or *metastatic pneumonia*.—Finally, pleurisy, acute or chronic bronchitis, bronchorrhea, pulmonary tubercles, organic affections of the heart, typhoid and intermittent fever, with various other diseases, are frequently complicated with pneumonia, and appear to have greater or less influence over its development.

Epidemic pneumonias are not unfrequently met with, especially in hospitals. The *primitive* form is generally owing to cold, or intense and repeated changes in the temperature and moisture of the atmosphere. The *secondary* form, or that arising in the course of other maladies, is sometimes combined with epidemic diseases of well-known origin, as typhus, or intermittent fever; at other times its cause altogether escapes our means of investigation, as when attending epidemics of small-pox or measles. Pneumonia has never been observed to be truly contagious, unless complicated with some disease possessing that character, as small-pox, measles, scarlatina, typhus, &c.

On the causes of Pneumonia considered in reference to age.—In the *Old Man*, a state of habitual bronchorrhea or permanent congestion of the respiratory apparatus are the chief predisposing causes. These are generally induced by a state of rigidity of the whole respiratory apparatus which prevents the free passage of the air, as well as the pulmonary circulation; we must also notice organic affections of the heart and of the large vessels, and that condition of debility, so common at this age. Cold and variations of temperature are, in like manner, powerful agents in the production of pneumonia in old men. The maximum of frequency has been shown to be in the month of March and the first part of April; proving that changes of temperature are more fertile in the production of the disease than absolute cold. In *Infants*, it is necessary to distinguish the *primitive* form of the malady, or that attacking subjects in good health, from the *secondary* species, affecting individuals already diseased. All authors agree that the primitive form is scarcely ever met with in the child; thus offering a decided contrast to the adult. The affections which it most frequently complicates, are measles, chronic enteritis and hooping-cough, between 2 and 5 years of age; and measles and small-pox, from 6 to 15. Gangrene of the mouth almost always accompanies pneumonia at this age. A prolonged stay in the hospital and dorsal decubitus are also favourable to its development. Sex does not appear to have much influence at this period of life. According to M. Valleix, pneumonia does not attack the *new-born child* till some days after birth; ten days he states to be the mean term. Cold appears to be the only occasional cause whose action can be traced at this age. We have no authenticated case of pneumonia being developed during intra-uterine life.

TREATMENT.—*Blood-letting.*—Physicians in all ages have regarded pneumonia as one of the diseases in which blood-letting exercises the most salutary effects. "*Hujus morbi curatio*," said the illustrious Sydenham, "*in repetita venæ sectione, fere tota est.*" Blood-letting acts in pneumonia as in all other inflammations; it diminishes the quantity of blood traversing the respiratory organ in a given time; and by opposing the stagnation of blood in this viscus, it renders it more permeable to the air, and checks the progress of the dyspnoea. According to Laënnec, the usual method consists in taking away at the commencement of the disease from 8 to 16 ounces, and repeating this every day, and sometimes twice a day, if the inflammatory symptoms do not yield, or if after

being checked, they again put on their original character. After five or six days we allow a longer interval between the bleedings, or else merely abstract blood upon some urgent indication, as a return of force in the pulse, or augmentation of the febrile symptoms. This plan is advocated by numerous ancient as well as modern authors. M. Bouillaud, however, proposes the following system in treating pneumonia, if not of excessive intensity or extent, whether in the first or second stage. *First Day.*—Bleeding from the arm to 16 ounces in the morning, and again in the evening to nearly the same amount. In the interval between the two bleedings, 30 leeches should be applied upon the painful side, or the patient should be cupped to about 12 ounces. *Second Day.*—A third bleeding from the arm to a similar extent, and if the pain persists, repeat the leeches or cupping. *Third Day.*—The majority of pneumonias, if in the first stage, are overcome by the third day of this treatment. Should they, however, resist, we must, without hesitation, bleed again to 12 or 16 ounces. *Fourth Day.*—Pneumonia, even when arrived at the second stage, rarely persists beyond the fourth day under these means. If, however, the reverse be the case, we must repeat the bleeding; but a large blister upon the diseased side usually answers better. As a general rule, blood-letting should be laid aside the moment that the fever is removed, and the pain and dyspnoea cease. *Fifth and Sixth Days.*—We have generally, but attentively to watch the patient. Most usually, resolution quickly takes place, and the appetite already begins to return; in some exceptional cases, a degree of re-action may show itself, and require cautious blood-letting. Here, however, I think we might try with advantage full doses of tartar-emetica. Such is the usual practice adopted by M. Bouillaud. But if the pneumonia be altogether of a slighter character, it will generally be removed by two or three bleedings. If very severe, or if it has invaded the greater part of both lungs, we must have recourse even yet more freely to the use of the lancet.

It appears to be a matter of indifference which arm we bleed from, provided a free orifice be made. It has been advised by Huxham and others to open both arms at the same time in very severe cases. Small and repeated bleedings have been recommended by M. Husson, especially in individuals affected with chronic diseases, in aged people, and in very young children. Bleeding from the foot is preferred by many, as enabling the surgeon more easily to obtain a large quantity of blood, as well as more rapidly to relieve the respiratory organs. *Bleeding from the jugular vein.*—Some authors, as Haller, speak of having obtained unexpected success by opening the jugular vein in those cases, where the lung is so engorged, that not only is respiration rendered difficult, but in consequence of the hindrance to the return of blood from the head, the jugular veins become distended, the face red and livid, the anxiety intense, the pulse obscure and depressed, &c. Arteriotomy has also many advocates, especially among the ancients. *Should syncope be induced in the treatment of pneumonia?* This is a question much contested, and which requires further experience to be enabled to answer satisfactorily. Local bleedings are usually inferior to general blood-letting; still it is often useful to combine the action of both modes of evacuation, and to have recourse to the one during the intervals of the other. In local bleeding, cupping, where it can readily be employed, is preferable to leeches, inasmuch as it combines at the same time the effects of bleeding with those of a powerful revulsive; we can also judge more correctly of the quantity of blood taken. Local blood-letting will be especially serviceable in those cases where from the debility induced by the affection itself, or by some antecedent disease, venesection would appear to be contra-indicated. Leeches might be advantageously applied to the anus or vulva where hamorrhoidal or menstrual suppression may seem to have had some influence over the development of pneumonia. Lastly, Lieutaud speaks of having derived great benefit from cupping the lower extremities when the expectoration had been suddenly suppressed.

Such are the different modes for abstraction of blood recommended by ancient as well as modern

writers. M. Louis, however, in his valuable work, entitled, "*Recherches sur les effets de la saignée dans quelques maladies inflammatoires*," (1835), enters into an able examination of the effects of blood-letting in pneumonia, among other diseases, and seems to question much the power usually allowed to this mode of treatment. The following are the conclusions at which he arrives: "1. That blood-letting exercises a favourable influence over the progress of pneumonia; that it abridges its duration; but still this influence is much less than is generally imagined, so that patients who are bled during the first four days of the affection, become cured, *ceteris paribus*, four or five days sooner than those who are bled at a later period.—2. That we do not annihilate the inflammation by means of blood letting, at least during the first days of the disease. And if the contrary be believed, it is undoubtedly from having confounded this affection with some other; or else that, as in some rare cases, the general symptoms diminish rapidly after a first bleeding. But then the local symptoms, generally speaking, continue increasing in intensity."

Such also is the result of my own experience. M. Bouillaud, however, arrives at a very opposite conclusion. He states the mortality of pneumonia, when treated by repeated abstraction of blood, to be 21 in 178 cases, or about 1 to 8½. "But," he adds, "among the 21 who died, some could not be subjected to repeated venesection, and others arrived at the hospital in such a state, that nothing but a miracle could have cured them. We, therefore, think we may justly draw the following conclusion:—"*That in patients from 16 to 20 years of age, of a tolerable constitution, and treated from the first two or three days of the pneumonia by repeated venesection, the cure is the rule, and death the exception.*" The principal cases of exception, he states to be, a pneumonia invading almost the whole of both lungs, or some grave complication, as violent meningitis.

Whatever the mode adopted in the employment of blood-letting, we must remember that the number of bleedings, the quantity of blood to be taken at each, and the interval to be allowed between, must be regulated according to the intensity of the disease, the strength, age, temperament, and sex of the patient, as well as the complications of the affection, &c. The respiration is also a good guide as to the necessity of repeating the blood-letting, which is generally indicated in proportion to the intensity of the dyspnoea. The pulse, although it furnishes some useful information, is liable to deceive an inexperienced observer. In some cases, in fact, it is excessively feeble and small, but after the first bleeding, it rises and calls for further abstraction of blood. *Fainting-fits*, unless dependent on real debility, do not contra-indicate blood-letting. The appearance of the blood as an indication for venesection is a subject of considerable dispute; some considering it a fatal sign if the blood of the second or third abstraction is devoid of buff. Others, on the contrary, do not regard this condition, inasmuch as many circumstances altogether foreign to the disease, as the size of the orifice in the vein, the shape of the vessel into which the blood is received, the height from whence the liquid falls, &c., greatly modify its mode of coagulation and the formation of the buff. In some cases, the blood obtained by the first venesection has scarcely coagulated, and that by the 3d or 4th, has presented a firm and solid clot, covered with a thick buff.

Antimonial preparations in high doses.—*Tartar Emetic*.—The advantages of this mode of treatment, in pneumonia, are greatly contested; some regard it as the most powerful means of overcoming the disease, while others look upon it as altogether dangerous. The doses in which the tartar-emic is given, are somewhat various. Most usually four or six grains are dissolved in four ounces of infusion of the flowers of the lime-tree, or of infusion of orange-peel, sufficiently sweetened, and a table spoonful given every hour; Laënnec used to give a grain every two hours. The quantity is gradually increased, according to the progress of the disease, to 12 and 18 grains to the four-ounce mixture. If the vomitings and purgings are too frequent, one or two

grains of opium, or one ounce or an ounce and a half of syrup of poppies must be added to the mixture, and the interval between the doses should be increased. In the immense majority of cases, the first doses give rise to vomitings and copious purgings; but tolerance of the medicine is soon established. In some cases, however, notwithstanding all our precautions, the vomiting and purging continue. Generally speaking, the thirst rapidly declines; sometimes, however, it increases till the second or third day, when it suddenly disappears. The appetite occasionally acquires great activity and the patient will digest solid food. A sensation of itching, with heat, is often developed in the pharynx and œsophagus, accompanied with a certain degree of dysphagia. On the appearance of these symptoms we should diminish the dose, or even altogether suspend it, for fear of giving rise to some grave affection.

This medicine, in general, quickly reduces the number of the respiratory movements, although, occasionally, the reverse is the case; it lowers the pulse, soothes the nervous irritability, and excites the secretions. It does not suppress the menses, but even seems to favour their appearance; which is important in women who either are menstruating, or are about to do so. Such are the usual effects of tartar-emic in high doses. In some subjects, however, it is apt to induce inflammation of the digestive tube, as well as a pustular eruption, shewing itself upon the lips, the tongue, and the pharynx, and greatly resembling the pustules formed upon the skin, after the employment of tartar-emic ointment. M. Piorry mentions an instance where the medicine gave rise to intense gastritis, attended with the production of false membranes over the whole surface of the stomach. Antimonial salivation is also sometimes observed; the tongue becomes thick and less moveable; the teeth form ulcerations upon its sides; a constant flow of saliva takes place, and the patient can hardly speak for the swelling of the tongue and throat. These symptoms, however, generally disappear in a few days after the suspension of the medicine. Some physicians, according to the Rasorian method, administer the tartar-emic from the commencement of the pneumonia, if of an open character, whatever its intensity. This mode is, however, generally rejected, its employment being preceded by one or more bleedings. Still, in some cases, blood-letting cannot be had recourse to, and full doses of tartar-emic are then our most powerful resource. Thus, we may instance, 1st, pneumonia which has been neglected for several days, where the patient is already extremely weakened; 2d, pneumonia complicated with eruptive diseases, where it is often very dangerous to have recourse to blood-letting; 3d, in phthisical, scrofulous, or chlorotic subjects; 4th, when the patient obstinately refuses to be bled. *Emetics*, especially small doses of tartar-emic, are frequently employed with success after one or more bleedings. For my own part, I prefer this treatment to the high doses of the medicine. It acts upon the digestive tube as a revulsive and derivative; it causes diaphoresis, and at the same time mechanically compresses, as it were, the blood from the engorged lung.—*Laxatives and Purgatives*. It is important to keep the bowels freely open during the course of pneumonia, by means of lavements or gentle laxatives. Purgatives should not be given till after one or more bleedings; then, to be repeated as often as necessary.—*Emollient applications* to the chest have been advised by some, especially where thoracic pains are urgent; they are now-a-days almost abandoned, on account of the disposition to chill which they leave behind.—*Sudorifics*. A popular custom is that of administering a glass of hot negus in the commencement of the affection; a practice which, although it may succeed in some cases, is generally injurious. The vapour bath, with active friction over the whole surface of the body, appears to have succeeded in the beginning of the disease in some instances; Hippocrates also recommended hot baths, but only at the commencement of the pneumonia. *Dry cupping* on the back and on the præcordial region was adopted by Aretæus. The large cupping instruments of M. Junod, in which one or more limbs are introduced,

might be very useful in anæmie or debilitated patients, during the first or second stage of the disease, to diminish congestion in the inflamed portion of the lung, or perhaps even to combat the inflammation itself. *Blisters* are certainly of considerable utility after the employment of blood-letting. Before depletion, however, in acute inflammatory affections, they are considered apt to increase the excitement and render the danger of inflammation in some neighbouring organ more imminent. Still M. Latour speaks of having obtained remarkable success from the application of a large blister upon the painful side, at the commencement of pneumonia, without any previous treatment. He however excepts cases of excessive plethora or extreme irritability. This means he states, is so powerful, that it is not rare to see patients, after being subjected to it, become convalescent in twenty-four hours. *Narcotics* should if possible be avoided; they are principally useful towards the decline of the disease, when pain in the side and insomnolency persist. The drinks should be mucilaginous and tepid; they may be given frequently, but in small quantities, for fear of distending the stomach and so embarrassing respiration. *Acids* are generally regarded as injurious. *Nitre* has been employed by some, either separately or in the drinks. *Cold*.—Dr. Campagnano, of Naples, has successfully employed cold baths, iced-water, and snow in large quantities. He states that the effects were almost miraculous. *Calomel*, combined with opium, is especially employed in England and Germany; it is generally preceded by blood-letting, and given in the dose of three or four grains, five times a-day, or from two to four grains every hour till free salivation is induced. *Digitalis*, carbonate of potass, nitrate of potass, acetate of lead, and prussic acid, have also had their advocates.

Hygienic measures.—It is almost universally admitted that the air should be of a moderate temperature. Recently, however, Dr. Drake, of New York, has advised the inspiration of cold air in acute and chronic bronchitis. Might its use be extended to affections of the pulmonary parent chyma itself? The apartment should be as large as possible, and well ventilated. The patient should be kept half seated in bed, for the horizontal position increases the pulmonary congestion. He should be moderately covered, and not speak without necessity. During the first few days, the strictest diet must be adopted. Broths should only be allowed at a more advanced stage. The diet should be most severe in fat subjects; for the adipose matter which is spread throughout the body appears to furnish, by absorption, the materials of a new assimilation capable of repairing in part the losses occasioned by the disease as well as by the means brought to bear against it. This mode of alimentation is proved by the fact, that abstinence is best supported by those individuals in whom the embonpoint is most considerable.

Treatment of the various forms of Pneumonia.—*Hypostatic Pneumonia*.—We must, in this form, avoid, as much as possible, leaving the patient on his back; his position should be frequently changed—general blood-letting will be indicated according to the quantity of blood in the system, and the strength of the patient. Drinks should be allowed but sparingly. If great debility be present we must give tonics and cordials. The treatment with tartar-emic, does not appear to be so useful in this form as in acute pneumonia. In pneumonia complicated with pseudo-membranous bronchitis, antiphlogistics should be sparingly employed, lest by weakening the patient, he should not have strength left to expectorate the false membranes. Full doses of tartarized antimony or emetics are most serviceable in these cases. *Acute tuberculous pneumonia*, if accompanied by considerable febrile movement, will require venesection proportioned to the strength of the patient and the violence of the symptoms; the application of leeches beneath the clavicles, followed by blisters, will also be of service. Should the debility or emaciation seem to contra-indicate general bleeding, leeches alone, or blistering, are the only means that can be borne. *Adynamic pneumonia* will require powerful tonics, together with revulsives to the skin, and every means capable of reanimating the

vital powers. The *pseudo-adyamic form*, as calling for depletory measures, must be carefully distinguished from the true adynamic species. *Irregular pneumonia* should be treated as the simple form; where, however, these means fail, tepid baths and revulsives to the extremities should be had recourse to. *Musk* has also been strongly recommended in this species of pneumonia. *Bilious pneumonia*. We must here distinguish pneumonia accompanied with accidental bilious symptoms, imprinting no special character on the pulmonary inflammation, from true bilious pneumonia, in which the inflammation of the lung and the bilious state form but one affection, and require the same treatment. In true bilious pneumonia, where the bilious symptoms precede those of the pulmonary inflammation, blood-letting often has no effect, or may be even injurious, while the treatment indicated consists in the employment of acidulous drinks and emetics. Where, on the contrary, the ordinary symptoms of pneumonia have preceded the bilious affection, antiphlogistic measures must be had recourse to. In *puerperal pneumonia*, we should be extremely cautious in the employment of blood-letting. It must, however, be treated according to its prevailing symptoms. Bleeding from the foot, or the application of leeches to the hæmorrhoidal veins, might, perhaps, be preferable in this condition. *Typhoid pneumonia*.—When pneumonia supervenes at the commencement of typhoid fever we must employ the most active antiphlogistic measures, taking care, however, not to lower the patient so much as to render it impossible for him to support the ulterior course of the primary disease. But if the pulmonary affection, as is often the case, commences towards the termination of typhus or even during convalescence, the case becomes exceedingly grave and embarrassing, for the local affection requires depletion, which is sure to aggravate the general state of the patient. We must, therefore, employ blood-letting with the greatest prudence; cupping or leeches will be preferable to venesection. If the patient is so weak that these means are contra-indicated, we must, while administering tonics, attack the pneumonia by means of revulsives, as rubefacients, blisters, and dry-cupping. Tartar-emetic might also be serviceable. *Exanthematous pneumonia*.—In the pneumonia accompanying acute cutaneous eruptions, as measles, scarlatina, or small-pox, blood-letting is of much less use than in the ordinary form. Cupping, leeches, blisters, rubefacients, &c. are indicated in this as in the last form. In *metastatic pneumonia*, depending on the disappearance of some cutaneous disease, gout, or rheumatism, we should, as soon as possible, apply a sinapism, or even a blister upon the seat of the primitive affection. A practice adopted by some is to place a sinapism upon the parts first affected; then to apply a number of leeches upon the reddened surface, and afterwards to repeat the sinapism till blisters are formed. *Intermittent pneumonia* must be treated by quinine and its preparations. In *epidemic pneumonia*, we must look to the form which it assumes; whether inflammatory, adynamic, ataxic, bilious, intermittent, &c. and adopt our measures accordingly. In the *pneumonia of drunkards*, we must combine the employment of wine and alcoholic liquors, together with venesection. In subjects of this class, however, pneumonia is a disease of a very fatal character.

Pneumonia in Old Men.—The antiphlogistic treatment, in old men, should be used with moderation. At this age, there is great danger of adynamic symptoms supervening, and hence we are often obliged to administer some slight tonic, or even diffusible stimulants, at the same time that we make use of blood-letting. Emetics are especially useful in aged people, by reason of the habitual engorgement of the bronchi. Revulsives, as a large blister applied upon the chest from the commencement of the disease, and purgatives, are also valuable resources. Narcotics should not be employed, unless under some special indication, as, great nervous agitation, or violent pain in the side. The diet should not be too sparing. Old people like children, cannot support prolonged fasting. During convalescence, great care is requisite to guard against a relapse.

Pneumonia in the Child.—In children, blood-

letting should be employed with the greatest parsimony. In infants, from two to four years of age, we should use local bleeding only; 12 to 15 leeches may be applied three or four times. In more aged children, venesection is frequently practised; from four to eight ounces of blood at a time may be taken from a child between five and eight years of age; from 8 to 12 ounces from those between 8 and 15; and bleedings of twelve ounces may even be repeated twice or three times a day, in children from 12 to 14 years old. Tartar-emetic might be employed usefully in the pneumonia of children, although it has been tried in but few cases, in high doses and unaided by the use of blood-letting. Blisters are not of great service at this age; in young children they are exceedingly inconvenient. As I before remarked, children are unable to bear a very strict diet. If the pneumonia be complicated with some other disease, blood-letting does not appear to have much modification over it. We must, then, if the affection be of a chronic nature, endeavour merely to correct the general condition of the body. The child should not be allowed to lie constantly in the same position, and the greatest cleanliness should be adopted. Slight tonics, and a nutritious diet, must be given. We may also prescribe the sulphurous baths, as recommended by M. Jadelot. If the pneumonia arise as a complication on some acute disease, we must employ the treatment by tartar-emetic, elevating the dose in proportion to the intensity of the symptoms. Slight contra-indications on the part of the digestive tube need not be regarded.

Pneumonia of New-Born Children.—The excessive mortality at this age, renders very difficult an exact appreciation of the various therapeutic means. Whatever treatment we employ, *internal diseases*, and pneumonia in particular, terminate by death in an immense majority of cases. M. Valleix, however, thinks that we have the same indications to fulfil as in more advanced life. Local bleedings, as well as tartar-emetic, he considers to be indicated in moderation. Sedatives should also, he thinks, be employed; as half a drachm of syrup of poppies administered internally or a lavement containing one or two drops of laudanum thrown up the rectum. Blisters should not be used.

Chronic Pneumonia.—Simple chronic pneumonia independant of all organic lesion, should be combatted by blisters, setons, or moxas upon the chest; the patient should be subjected to a mild regimen, and should remove to some temperate or even hot climate. If chronic pneumonia be attended by fever, and the individual be robust, blood-letting or rather the application of leeches might be advisable. Diuretics, laxatives, and sulphurous baths will also be indicated.

ON ORIGINAL DISLOCATION OF THE FEMUR.

By J. NOTTINGHAM, Esq., Surgeon.

(Continued from page 388.)

In the three preceding hypotheses, the displacement of the head of the thigh bone would only be congenital; in that which remains for us to examine it would be original, and would date from the first organization of the pubes. For there are, despite what some have said, original vices of conformation, and which are connected with defective organization of the germ. Now the malformation with which we are occupied, may it not, like many others, depend on a cause of this kind? With this hypothesis it is easy to understand the simultaneous displacement of the two femurs in the greater number of cases we meet with, as well as the perfect health enjoyed by the children at the time of birth, and also the complete absence of every effect, or appearance of preceding or existing malady, as well around the head of the femur, as within the cotyloid cavity.

What treatment ought we to employ for the relief of this affection? At first, palliative remedies appear to be the most rational, and I must say, that I have generally preferred them. If we recollect the natural tendency which the heads of the thigh bones have to mount upon the exterior of the ilium, and that the cause of this movement

of ascension is in the weight of the body, which constantly favours it, we shall readily understand the nature of the indications presented, and the reasons for the employment of palliative remedies. We shall easily conceive the necessity of preventing as much as possible the weight of the body from falling upon an articulation, the proper cavity of which is wanting, and of guarding the femur against that muscular action which carries it upwards on the ilium, as it is not protected from this influence by any mechanism of the parts. Repose is one of the first means of preventing the heads of the thigh bones from rising, as they sometimes do, as far nearly as the crista of the ilium; and the most convenient position of repose is the sitting posture, in which the weight of the upper parts of the body no longer bears upon the ilio-femoral articulations, but upon the tuberosities of the ischia. On this account it is desirable that persons in the lower walks of life who suffer from this infirmity, should be advised to choose occupations which they can follow in the sitting posture, and it is readily seen that any pursuit which would oblige them to remain in the upright posture, or to walk continually, would with their conformation be a dangerous kind of absurdity.

Nevertheless, persons suffering from this infirmity need not be doomed to continual quiet. We should, therefore, endeavour to discover some means of diminishing for them the inconveniences of the upright posture as well as those of walking or other exercises to which they may have occasion to betake themselves. Experience hitherto has only suggested to me two means of attaining this important end: the first consists in the daily use, where profuse perspirations, or the menstrual discharge, do not interfere, of the plunge bath, frequently repeated, the whole body, not excepting even the head (which may be covered with oiled silk) to be immersed in pure, or salt water, but cold, very cold, during three or four minutes each time. The effect of these baths is to invigorate the parts which surround the accidental articulation, and thus by augmenting their resisting power, to oppose the movement of ascension in the heads of the thigh bones.

The second consists in the constant employment, at least during the day, of a belt which embraces the pelvis, which receives the great trochanters, and holds them at a certain elevation, thus solidifying as it were these weakened parts, and preventing the continual vacillation of the body upon articulations without a cavity. To fulfil these indications the belt, which I recommend, should be made according to certain rules. Those I have been led to adopt are as follows:—it should be placed on the narrowest part of the pelvis, that is, between the cristæ of the ilia and the trochanters, it should occupy entirely the upper part of this space, and on this account its breadth should not be less than that of three or four fingers, modified to suit the age and stature of individuals. This belt should be stuffed with cotton and hair, and covered with doe-skin, that it may not injure the parts upon which it is applied; at the internal aspect of its lower border, narrow and superficial excavations should be made on either side, to receive and hold the trochanters without lodging them entirely. Buckles and straps placed on its extremities, and directed backwards, will serve to fix it around the pelvis; and large under-thigh straps, stuffed and covered like the belt itself, but broad and a little hollowed opposite the tuberosities of the ischium, ought to hold the belt at a constant elevation, and prevent its abandoning the precise region upon which it ought always to be applied.

In this way I have been able to arrest the progress of the inconveniences of this luxation, and to render supportable the bad effects which I could not hope to destroy. Of this fact some patients have supplied me indubitable proofs; for fatigued by the pressure of the belt, they have thrown it off, but have soon been obliged to resume it, because without it there was no firmness in the hips, or steadiness in the walk.

At first it was thought that traction exerted on the lower limbs would be of no use; for though we might suppose that by such means the limbs would be brought to their natural length, is it

not evident that the head of the femur finding no cavity disposed so as to receive it, or capable of retaining it, the limb would lose as soon as left to itself that additional length which had been imparted to it by extension?

This opinion has, nevertheless been modified by the labours of Messrs. Lafond and Duval. These distinguished practitioners, profiting by the publication of the memoir of M. Dupuytren, as was remarked by Dr. Caillard-Billoniere, happily hit upon the plan of submitting a child between eight and nine years of age, and affected with congenital displacement of the thigh-bones of both sides, to a process of continued extension in their orthopedic establishment at Chaillot; and M. Dupuytren found that after several weeks of the employment of these means, the two limbs had regained their due length and rectitude; but it was not without great astonishment that he found the greater part of the good effects produced by extension remaining during some weeks, at the end of three or four months after its employment. It is true that we cannot pretend to conclude from a single fact, respecting the utility of continued extension in original dislocation of the thigh bones, but this one fact is of itself important, and might become much more so by consequences which may possibly follow it.

To this first example, reported by M. Caillard, we may add a second and a very interesting one, related by Dr. Jalade-Lafond in his beautiful work, entitled:—“*Recherches Pratiques sur les Difformités du Corps humain et sur les moyens d'y remédier.*”

Miss A., aged nine years, was placed under our care in our establishment, during the year 1828; her condition was more or less as follows:—She was of ordinary stature, for her age, of a strong constitution, and in the enjoyment of good health. The bending or hollow of the loins, the projection of the nates backwards, and the lateral balancing of the body, imparted to her gait something which resembled the waddling of the duck. There was but little firmness in her standing or walking. In the examination of the loins the following phenomena were observed:—Projection of the nates, the great trochanter approaching the anterior and superior spinous process of the ilium, and when the foot was turned outward there was felt upon the dorsum of the ilium, a hard tumour, evidently formed by the head of the femur; in the ordinary state however, the limb preserved its natural rectitude and the movements of rotation outward were effected with the usual facility.

When any attempt was made to lengthen the limb, the great trochanter was lowered as well as the whole of the upper extremity of the femur, producing now and then, a sort of crepitation which could be distinctly heard, and resulting from the friction of smooth and hard surfaces. These phenomena were observed on both sides.

The facility with which the limbs could be lengthened, suggested to us the idea of maintaining the head of the thigh bones by means of a gentle tension on a level with the cotyloid cavities; a belt placed upon the hips pushed downwards the upper extremity of the thigh bones, while traction exerted upon the feet assisted in producing the same effect, the trunk being all the while fixed to the upper part of the extending belt; in standing and walking the body was always supported by crutches. Some success induced us to continue these means during a considerable time; but not obtaining all that we hoped for at first, and the patient being very unmanageable we discontinued the treatment. We may say nevertheless that this young person was much improved in her walking when she left our establishment. It is probable that this amelioration was effected by the cold baths, by the salt water, and sulphur baths, by the tonic affusions administered locally, and by the gymnastic exercises of which she was passionately fond, but especially by the action of the mechanism of the oscillatory extension.

M. Dupuytren remarked in conclusion, that original luxation of the thigh bones is not so rare as might be supposed. He said, I have met with twenty-five, or twenty-six cases in the space of twenty years, the first of my observations of this

malady having been made at the commencement of this period. A last remark, and which is not without interest, is, that nearly all the individuals affected with this luxation, are of the female sex; in fact out of the twenty-six cases which I have observed three or four at most, belonged to the male sex. We cannot admit that chance is the cause of this disproportion; but supposing it to be constant, how does it happen that the female sex is more subject to original luxation of the femur than the male? I admit that I cannot at present offer a satisfactory reason for this; I could not at most give aught beyond a general one, which is that vices of conformation are found, by constant observation, to be much more common in the female than in the male sex. I hope that further observation may ere long furnish the explanation of this peculiarity, and assist in completing my researches.

CURABILITY OF CONSUMPTION.

To the Editor of the 'MEDICAL TIMES.'

SIR,—Before entering into further disquisitions on the principles I have avowed, permit me to submit a few additional facts confirmatory of the main question. This mode of procedure, both in the way of argument and illustration, will perhaps more readily, remove prejudice and induce conviction.

Dr. Ramadge was called in, some time in the year 1826, to see a young lady, Miss S—th, daughter of a respectable individual in business in Little Britain. He found her labouring under an affection of the heart, attended with difficulty of breathing, and the respiration was somewhat obscure in the summit of the left lung. She was an occasional patient till 1831; when, during convalescence from an attack of continued fever in the spring of the year, she began to cough, and expectorate blood and purulent matter; evening chills, and night sweats took place; in fact, she exhibited all the symptoms of manifest consumption. An unctuous guggle was heard every time she coughed, clearly indicating the existence of a cavity in the left lung. Her chest, which had been formerly large, presented a marked depression under the clavicle of the left side. There was no possibility of preventing the progress of the tuberculous liquefaction; to effect therefore, an immediate removal of the symptoms, was not possible. Her friends were advised to hear the opinion of Dr. T. Davies, the junior physician of the Infirmary for Diseases of the Lungs, who accordingly met Dr. Ramadge in consultation, and agreed that the case was one of genuine consumption; but, without concurrence or reserve, took on himself to announce to the family, the utter hopelessness of the patient's recovery. No words can describe the agonised state of the parents' feelings on receiving so unexpected a sentence; but, under the impression that he had only given an unbiassed, candid opinion, his services were retained, and those of Dr. Ramadge dispensed with. About a month afterwards, however, Dr. Ramadge was again sent for, when he very naturally expressed his surprise, that greater confidence should have been placed in the prognosis of an individual whose opportunities of experience had been so much less extensive than his own (Dr. Ramadge having been five years sole physician to the infirmary before Dr. Davies's connection with a moiety of its practice); and besides whose incorrectness he had so frequently verified before, both by post-mortem examinations, and in cases still living. The case was now left to Dr. Ramadge's sole management, and the young lady recovered in the course of a few months, and has since been quite free from all phthisical symptoms. She has been seen by Mr. Lloyd of St. Bartholomew's Hospital, and also by Dr. James Blundell to whom she was presented by the family as an instance of a case cured, though originally, with so much confidence, pronounced incurable.

A young lady, Miss S—tt, about sixteen years of age, then residing close by St. Bartholomew's Hospital, and since removed to Charterhouse Square, after having had the advice of two or three medical men—one of whom was her own uncle—was submitted to the judgment of Dr.

Davies in the month of Nov. 1831. She exhibited the usual symptoms of consumption, which appeared to have been brought on by scarlet fever, caught some time previously in a school kept by Dr. Davies's sister-in-law. She had always been of delicate habit, and her lungs, no doubt, were previously tuberculated. Either in consequence of the fever, or the liquefying powers of mercury, which had been employed in subduing it, a cavity had formed, the existence of which was with him a *sine qua non* to determine the positive presence of consumption and its consequent incurability; all other cases he rejected as spurious, or not proved. The moment he satisfied himself of the nature of the case, he pronounced it hopeless, and said it was not possible she could survive to see Christmas. Notwithstanding this prognosis, she however, still lives and enjoys excellent health. She was presented to Dr. Ramadge for his advice in the spring of 1833, suffering under asthmatic, combined with phthisical disease. Her asthma was so severe as to render her for whole nights incapable of lying down. The cavity in the chest remained distinctly perceptible on auscultation. She had become catarrhal owing to the winter season, and, besides from hereditary bias, derived a predisposition to convulsive breathing. It might be supposed that the supervention of asthma, and consequent emphysematous state of the lungs, would have brought the walls of the cavity into contact and produced its obliteration, but here the surrounding induration of the pulmonary tissue seems to have been of such a thickness as to prevent the emphysematous pressure on the parietes of the excavation from accomplishing union. Some plueritic adhesion, also might have interfered with mobility and expansion of the lung towards the diseased structure. Not dismayed by this complication of asthma with phthisis, having first soothed the spasmodic irritability of the trachea, which is ever present in asthma, by a leech or two, occasionally, on the depression above the sternum, he advised the adoption of the process of inhalation, along with sedatives, diuretics, &c. The primary object was to reduce the distressing enlargement of the pulmonary tissue; this was effected by making her expirations more complete through the agency of the inhaling tube. Meanwhile proper attention was directed to reduce congestion in the summit of the diseased lung, and inhalation, while exerting its salutary influence on the asthma, was approximatory of the sides of the cavity by the mode of operation explained in a former paper. Her recovery was tedious, owing in a great measure, to her occasionally discontinuing the treatment when decided amendment shewed itself. Her chest, which at the commencement was remarkably flattened in front with prominent shoulders, by degrees became sensibly improved, and acquired a very satisfactory amount of development. She has now no signs of either asthma or consumption, and enjoys very good general health.

The eldest son of Mr. E—g—n, the extensive marquée manufacturer at Smithfield Bars, in the year 1831, as well as I can recollect, presented all the symptoms of consumption, and was given up by Dr. T. Davies as incurable. Notwithstanding this gloomy prognosis, he gradually recovered and remained in tolerable health till about three years ago, when he was again seized with a severe cough, sanguineous expectoration, and other alarming symptoms. On examination of his chest, by Dr. Ramadge, there was observed a great contraction of the left side, more particularly superiorly and anteriorly; beneath which, on exploration, a cavity was detected which had probably been in existence and unnoticed since his first attack. Febrifuge, demulcent, and sedative treatment, followed by the mechanical process, were recommended; and the result was highly satisfactory. He is now living, and well. This case was attended also at the time by Messrs Castle and Turner of Bermondsey, who deservedly enjoy a very extensive and respectable practice, and with much candour informed Mr. E—g—n, in the presence of his family, that Dr. Davies had in more than one instance expressed similar opinions and erred in his prognosis, inasmuch as the patients recovered.—

PHILANTHOPUS.

TO CORRESPONDENTS.

Vol. 7 commences with Oct. 1—orders should at once be given to the booksellers.

In consequence of giving Professor Chomel's Lectures at some length, to conclude them with the present volume, several interesting papers which we expected to give this week are delayed to our next number.

We have received the following letter: "Sir,—I have great pleasure in informing you that the strong strictures you made some time ago, in reference to the working of the Anatomy Bill, have at length produced their effect. A government enquiry was set on foot, conducted by Mr. Joseph H. Green and Mr. Travers, and after lengthened investigation, in the course of which all Dr. Somerville's papers were compulsorily examined, the report was so little favourable to the wisdom or the fairness of that gentleman's supervision of his important duties, that he has been dismissed from his post. As the only journal that handled this matter, I think it right to let you know this circumstance.—Yours, &c., 'OBSERVER.'" This is satisfactory. We understand that Dr. Short is appointed in Dr. Somerville's place,

M. S.—We referred to double numbers sent to different localities.

Dr Jeffreys.—We know nothing of the post number. We recommend the customary course.

A mass of communications have been received.

OUR NEXT NUMBER (THE FIRST OF VOL. VII.) WILL BE THE STUDENTS' NUMBER, CONSISTING OF SEVENTY-TWO QUARTO COLUMNS, (PRICE 4d.) AND PUBLISHED AT THE LATE LANCET OFFICE, ESSEX STREET, AND AT 10, WELLINGTON STREET NORTH. IT WILL CONTAIN THE FIRST LECTURE OF A NEW COURSE, ON THE GENERATION OF ORGANS, BY THE CELEBRATED PROFESSOR SERRES.

THE MEDICAL TIMES.

SATURDAY, SEPTEMBER 24, 1842.

O fortes pejora que passi!

It is somewhat consoling to reflect that a great social benefit like the destruction of intramural interments, should not only have been declared of pressing urgency by a committee of our legislature, but passing the boundaries of good men's speculations, should have assumed that practical form which gives a pleasing assurance of incipient being, and early usefulness—we mean a bill of Parliament. Mr. Mackinnon, whose industry as chairman of the Committee is beyond all praise, has drawn up a scheme of law, which will be submitted to Parliament during the next session, and which—we can entertain little doubt—will be made the basis of an act that will be in operation through the whole extent of the country in less than two years. As the draught of this important Bill cannot but be of the highest interest to all our readers, and as being a necessary preliminary to some strictures which we think it calls for, we have prepared the following abstract of its contents.

After a preamble, declaring the customary modes of interment injurious to health, and frequently offensive to public decency, it records the following enactments:—

1. After a date to be fixed, no burial of any kind shall take place in or under any church, chapel, or other places of religious worship, or any inhabited private house or building, under a penalty of five pounds, to be levied on the executors, administrators, and all attending the funeral. The remains of "eminent men," however, with the consent of one of the principal Secretaries of State, may be interred in Westminster Abbey, or St. Paul's Cathedral.

2. After a date to be fixed, no burial shall take place within the distance of two miles from the precincts of London, Westminster, or Southwark, or within one mile of any other city, town or borough in England, containing more than a certain number of houses, the occupiers whereof shall be rated to the relief of the poor to the amount of ten pounds or upwards, or within the distance of one mile from the boundary of any place which shall contain within an area of fifty acres more than five hundred houses, the occupiers whereof shall be so rated to the amount of ten pounds or upwards; under a penalty on all aiding of five pounds. Cemeteries established by act of Parliament within ten years to be excepted.

3. Where there are no ascertained metes or bounds of a town, &c., the precincts will be the same with those which obtain for its paving and lighting.

4. After five years the elosed burial grounds may be planted by the churchwardens with shrubs, &c., or appropriated to some public use by the vestry. No excavations, however, are to be allowed lower than one foot for twenty years.

5. After a certain date, burials must take place before a certain number of hours after death, the allowed interval varying with the summer and winter seasons. Penalty for all concerned in infringing the law one pound for every twenty-four hours after the expiration of the respective periods.

6. Parochial committees of health are to be formed, consisting of the Church of England clergyman and the churchwardens, or two or more parishes may unite to form one Board of Health, similarly constituted.

7. Such committees may purchase land for cemeteries, which land, however, must not approach within 300 yards of any house of the annual value of fifty pounds; "or having a plantation or ornamental garden, or pleasure ground occupied therewith." The owner's consent, however, will make a difference.

8. Corporations, tenants for life or in-tail, &c., are empowered to sell lands for cemeteries.

9. Compensation, when the sum to be paid amounts to more than £200, to be placed in the hands of the Accountant-General of Chancery in certain special cases, and the 10th and 11th clauses contain enactments of a similar character for sums of smaller amount.

12. This defines who shall receive compensation in cases of disputed ownership.

13. The parochial committee shall alone

have power "to lay out and plant cemeteries," which by clause 14, must be enclosed within walls or fences of ten feet high.

The Bishop of the Diocese is now empowered to consecrate a portion of the ground to be used only for those of the established Church, he being however, previously satisfied that a good title to the same exists. We have now the consecrated divided from the unconsecrated by distinctive boundaries, such as may satisfy the Bishop, and a Chapel is ordered to be erected for the reception of the dead, and the purposes of Church Service. The rest of the ground is to be divided according to the numbers of persons of different religions, and Chapels for their respective burial services are to be in like manner erected. By clause 21 which we now come to, portions of both divisions of the cemeteries are to be located for the poor; the charge of their conveyance and interment being left to the adjustment of the committee. A table of fees is to be fixed and exposed in some conspicuous part of the cemetery. The sale of vaults, &c., in perpetuity, or for a term of years, to lie at the discretion of the committee.

Clause 24 mentions the form of grant, and 25 orders the burials to be registered by the respective officiating ministers. The registers to be subject to the regulations of 6 and 7 W. IV. c. 86 as to searches and taking of extracts. By clause 27, the rectors, &c. are to have the power of performing burial service in the new cemeteries, with all their former fees, &c., and 28 extends the same privilege to sextons and clerks. If the rectors, &c., decline, the committee, with the consent of the bishop, may appoint a chaplain, in which case the rector declining, shall receive such portion of the future fees as the bishop shall fix on, and the sexton, &c., declining, shall receive such portion as the committee shall fix on.

By clause 31 no grave is allowed to be opened twice in less than four years, unless there be exclusive property in such grave. The next fixes a rate of not more than a penny in the pound to be levied, according to the ratings, for the relief of the poor; and the committee have the fullest powers vested in them to enforce the rate. The most summary modes of levying all forfeitures, costs and charges being granted to them, and the magistrates being empowered where there are no effects, to order the summary committal of the defaulters to prison, for any period not exceeding three months. Passing clauses 34, 35, and 36, which merely give the processes of legal prosecution, we have in 37 a special exception made for the interment of the remains of the royal family, and the Bill concludes with the usual interpretation clause.

Here then is Mr. Mackinnon's Bill: a Bill which in its object calls for the warmest sympathy and heartiest support of every one who takes an interest in that public decency, public health, public morality, and national character, which are all so

closely involved in it. Of the numerous details of so important a measure we have not now space to speak, but shall take an early opportunity of explaining our sentiments.

POLICY OF MEDICAL REFORM.

(To the Editor of the "Medical Times.")

SIR,—Reform! Reform!! Reform!!! has been the cry during the whole of my medical career; at the commencement of my noviciate, Dr. Harrison, somewhere in the fens of Lincolnshire, was writing about the rot in sheep and medical reform. At that time, wonders were expected to be performed, and the profession was to become more respectable, efficient, and prosperous than it had ever been, yet little has been done, except by the Apothecaries' Act; that is, no general reorganization has been attempted. Dire have been the tossings, and heavy the groans, under the grievances which oppress the profession. How varied are the statements of these sorrows, and from what varied causes are they supposed to arise—what various theories have been brought into play to account for the morbid condition of the body—what numerous remedies have been suggested as calculated to cure the malady of many symptoms—how often have the legislature, the profession, and the people been appealed to for help, but as the nature, cause, and treatment of the disease are all involved in obscurity, it is feared but little can be done, and the case must be left to the mercies of the *Vis Medicatrix Naturæ*. I believe that much of the restlessness of the profession arises from the want of patients—the *pabulum vitæ* is practice, and unless this be supplied more equably, it is to be feared that inquietude will continue; but this cannot be effected. It is a lamentable fact that to a great proportion of the profession almost any change would be an amelioration of condition, therefore the continual cry of reform is not a matter of much surprise. I am now a grey-headed old man, and have puzzled myself with the question of medical reform for many years, and have come to the calm and deliberate conclusion that, in the present state of things, no legislative interference can do any good to the profession; that is, no organic change that I can think of seems to be calculated to effect anything that will in any way increase the happiness or usefulness of the profession. It has been often repeated, that there are more false facts than false theories, and common observation must teach every reflecting mind, that sound principles are frequently blamed for the blunders that belong to the mode in which they are worked out. There are far more abuses in the execution than in the legislation in all the affairs of life. I can think of only one act of Government that is desirable as regards the public and the profession, which is the suppression of the sale of secret nostrums: give us that, and in all the remainder of the evils we can redress ourselves. What is the use of power if never employed? We call out for power, and neglect to use that which we have. Let the Apothecaries' Act be fairly and fully carried out, what will it avail of benefit to a hundredth part of the profession, or perhaps to a five-hundredth of it, that the Council of the College of Surgeons should be elected by all the Members of the College? I should, though an old member and a general practitioner, be sorry to see any alteration in the arrangements of the College, and do think that exclusive Surgeons are the most proper persons to be at the head of the institution; but again, I say, carry out the principle; let them be what they pretend to be, and not call themselves pure Surgeons, when nine-tenths of their practice is medical: but the legal privileges of the Members of the College of Surgeons are very limited, scarcely, in most instances, worth the price of the diploma; but as that is an honourable testimonial, it will be sought and valued as such. The apothecaries license is solely valued for its legal authority; the name is spurned, and many of the legally qualified medical practitioners in the less opulent and fashionable parts of town, prefer having the designation chemist over their shop window to apothecary; the license confers no honour, but the legal power of the company is great; they can give

unlimited power of practice, and in this respect are at the head of the profession, and through that power, duly exercised, great improvement might be effected. The College of Physicians is all honour, and has no skill in surgery, and no legal power in any way that I know of. Appointed to see that no incompetent person should practice medicine within seven miles of London, they by their bye-laws, limited their operation to those only who do not prepare any of their own medicines—that is to exclusive prescribing practitioners. Their license is of less legal value than that of the Apothecaries' Company, and as they cannot confer degrees, they can only be considered as an association of the most educated and polished of the profession, a kind of Royal Medical Society. If the licentiates be considered as members of it, then it is not truly and purely a society of Physicians, but a mixed community, for they admit those who are not graduates of any University; they have thrown away the power they had of controuling the entire of the medical practice of London and its vicinity. In this body no reform seems likely to take place; it will, probably, in less than fifty years, become extinct. The legal line of demarcation between practitioners is now quite obliterated, and can scarcely be thought possible, in these times of liberal sentiments, ever to be laid down again. Except as regards secret nostrums, let us look to ourselves, and not trouble the Government of the country with imaginary evils. As things exist, the profession will work quite as well as it would under any other plan, and, perhaps, better, if there was one pressing grievance well acknowledged, it might then be right to endeavour to have it removed; but to think that any of the proposed complex plans of reform, can be carried into effect without creating more inconvenience than at present exists, appears to be an infatuation.

I am, Sir,

Your obedient Servant,

PETER ANODYNE.

London, 5th Sept., 1842.

[We think we recognize an old hand here: we shall recur to some of these observations on a future occasion.—*Ed.*]

TREATMENT OF HERNIA.

To the Editor of the "Medical Times."

SIR,—IN reading the *Medical Times*, I observed a method recommended for the cure of Hernia;—introducing the tube of the stomach-pump into the colon, and thereby permitting the flatus to escape; this, in some cases, might be efficacious, it will frequently happen, however, that much more will be required.

I have, for the last four or five years adapted a practice which in the few cases I have had, has proved invariably successful.

After finding the taxis unavailing, I make an infusion of tobacco, 3j. to the pint of boiling water, which I use as follows:—

I introduce the tube about nine or ten inches into the rectum, and then by means of the syringe, throw in one jet: this I allow to remain two or three minutes, examining the pulse to perceive if influenced by the tobacco;—I then repeat the jets, watching for any symptom of syncope, upon the appearance of which, I withdraw the tube, and placing my hand gently upon the tumor, (if it has not already receded) and it will almost immediately disappear, (except in cases of incarceration), without any of the unpleasant effects so frequently resulting from the employment of tobacco.

In those cases, where the tumor and the abdomen were so tender as scarcely to bear being touched, the pain and tenderness have disappeared upon the first jet being thrown up.

I was led to the use of the tobacco in the early treatment of Hernia, from the frequent failure of the various means recommended, all of which tend to enervate the system and pre-

vent the safe adoption of the only remaining remedy before the operation.

The only difference in my practice and that generally followed is,—I begin with the last remedy—(tobacco), when the powers of life are in full vigour, which is generally the case in the early stages of Hernia.

If you consider the above worthy your pages, I beg to request you will insert it.

I am, sir,

Your obedient Servant.

E. A. SMITH, Surgeon.

47, Prince George Street, Portsea,
Sept. 19th, 1842.

CASE OF MESMERIC PHRENOLOGY, WITH OBSERVATIONS.

By H. G. ATKINSON, Esq., F.G.S.

Case of a lady between forty and fifty, of sanguine temperament and sensitive nerve, a well developed brain, and general good health; but subject to occasional cold and cough, and lately to deafness, which increases after excitement, and from fatigue and cold. It was with the hope of relieving this, that she first consented to be mesmerised. Placing my hand over her head, but without touching, she quickly felt the effect, as of an electric shock passing through from her head to the extremities, as though, as she expressed it, she had been "knocked down." In three minutes her eyes closed, and she fell back in the chair powerless, and to all appearance in a deep sleep. I lifted up her arms and they remained in whatever position I placed them, and if pressed down rose to their place again, as an elastic spring.* I pressed on the organ of benevolence, and she said: "I see some one hurt," turning away her head, as if pained at the sight. Having been asleep for a quarter of an hour, she awoke, felt very well, and as though she had had a long and refreshing rest.

This lady thus exhibited the phenomena of mesmero-phrenology, as was the case with my other patients from the first; and it is interesting to observe the manner in which this power is displayed. At first, when requested to point out the situation where any particular sensation was felt, she would think a little, as if exciting the feeling—moving her hand above the part, like a hawk hovering over its prey; and when she was quite satisfied, her fingers would fall upon the spot sharply, and she would say, "it is there." Sometimes she would declare that she could not feel what was pictured to her, saying, "no, I cannot feel it—I cannot tell;" and at other times, but not often, when I touched a part she would say, "I cannot feel anything there now;" then, if I pressed hard, it would excite the part, and she would say, "now I feel it," and describe what it is. I have tried to deceive her by touching a little below the brain, but she has always said at once, "there is no thought there—there is no brain there;" and she will describe the shape of the bone, its size, thickness, and how put together. She will describe to you the powers which act in harmony together, and where they communicate; she will tell you the size and power of any organ, whether at the surface or at the base of the brain, and point out the exact space which an organ covers; and she will define with great carefulness and beauty the precise functions of the different organs acting singly, or in any combination; she will tell you if any feeling be a primitive power, or a result from any combination,—such as the love of life—the love of home—of the past—the sense of the sublime, &c.

This lady has never, in her mesmeric state, shewn the slightest knowledge of my thoughts, or ever echoed my own ideas. When she is endeavouring to explain, I have tried to give her words and to lead her thoughts, but I have never been able to lead her; she gives her own definitions, and uses her own words; once or twice only she

* Her hands will follow mine by attraction, and I can place them in this way in any position, where they will continue extended until I alter their position; this I have effected from behind her, and from the opposite corner of the room.

has taken a word which I have given her, which seemed to express the idea she wished to convey—but she used it with exclamation, shewing that she felt it.

She remains quietly seated in her arm-chair, occasionally bending forward and holding out her hands towards me; but showing no further sympathy. In her natural state I am obliged to speak to her very loud, to make her hear; in her mesmeric state she hears the faintest whisper at the other end of the room. She is not sensible of the presence of other people; seldom hears them speak; is not at all conscious of their pressing her hand, nor, indeed, of pinching her fingers very severely.

She has confirmed the most of the organs, as generally understood by phrenologists, with certain modifications; but I shall only now dwell on the chief points of interest in her revelations,—wishing to speak as generally as possible, as it is likely there may prove to be some few inaccuracies, although I am convinced that the chief points will be found to be true. She is so clear and consistent—so decided and explanatory—the new organs being spoken of with precisely the same readiness and precision with those already ascertained.

This lady has no power to awake of herself, and when again in her natural state has no recollection of anything that has occurred in her mesmeric state; she will remember, sometimes, if any one but myself has touched her—a strange influence, which was unpleasant; and if I desire her to say or do anything at a particular time, when in her natural state, she has no consciousness of this until the time appointed arrives, and she will then feel immediately a disposition, almost as though compelled, to do or say what she has been desired to do, though still not conscious that the request was made in her mesmeric state. I have now three patients who have never failed in this.

In considering the new points which I have discovered, we must give the matter a fair consideration, and not hastily conclude that the whole is untrue, because we may find that another patient in some point has shewn something which does not exactly agree; for it is only by earnest and careful investigation in very perfect cases that we shall arrive at the whole truth. We have much to guard against in imperfect cases, and particularly where there exists a sympathy or necessary contact with the mesmeriser; but this is easily perceived;—besides, that difficulty is not impossibility, and even in these cases much may be observed and elicited which may be highly important and, at least, confirmatory.

In some patients particular organs are more easily excited than others, and at one time more readily than at another; but this should rather give us confidence in the truth of the question than otherwise. Again, something may have induced the patient to refer a certain feeling to the touch of a particular part, and that feeling may be afterwards excited by the touch of that part; but this would only shew that there are allowances to be made, and that slight discrepancies are not to be hastily taken as disproofs of the whole matter. And is no objection to be urged against cases where all appears to be in order and in harmony—where patients are equally decided on ascertained or unascertained points from the first, and explain them to you, at once objecting to anything false that you may propose?

In the last case which I saw at Dr. Elliotson's house, the patient was excited to attention to endeavour to recollect an air in music, by pressing the finger, as near as I can remember, a little below constructiveness; my patients are excited to hear beautiful music and sweet sounds when I touch the organ of music—whilst this patient, I am told, is not excited at all when you touch that part. Here might appear to be a discrepancy which would argue much against the facts of mesmero-phrenology, but, when we know a little more, perhaps it may turn out to be no discrepancy at all, but a new fact and confirmation; for it is only ignorance which hastily jumps at conclusions, in the wish to disprove what others have advanced. Now it is possible that this apparent discrepancy may not really be one, but may arise from causes

which I have explained; but I am inclined to think otherwise.

We must remember that this patient did not immediately hear sounds when the part referred to was touched, but her attention was excited to the recollection of sounds, or to sing. Now it is interesting to remark that my patient, whom I have just referred to, describes the organ of music as being a very small organ, as to surface, immediately above order, but going very deep; and that there is an intimate communication between this and another organ, which I shall call hearing, or attention to hearing, which is situated deep in, rather in front of the ear. It appears to me, that the spot touched was at the bottom of the organ of tune, or, at least, on the line of communication to the organ of attention to sounds. It is also described that there is an intimate connection from that part of the brain between ideality and caution—giving the desire of action or exertion to this part; so that what was displayed in this case was exactly what should have been expected, all the facts of the case being known. I could refer to other instances of a similar nature, but this is an example sufficient for my present purpose.

Having, then, endeavoured in these observations to prevent, as far as possible unnecessary objections from being raised, I shall proceed to give a list of what I consider to be the principal of my new discoveries.

In the cerebellum I have three additional organs, which have been distinctly marked out and explained over and over again; and I have had opportunities of confirming them in different ways without mesmerism, by natural language, by observation on development in cases of extreme muscular power and the contrary, in some curious cases of fatigue, and also in an interesting case of a poor girl who had her arm cut off above the elbow. The stump continued in violent motion for twelve months; she had violent fits, and they could give her no relief at the hospitals—but by mesmerism I have stopped the action of the arm. It has now been quite still for some weeks, the pains which I alluded to have ceased, or only come under excitement occasionally, and she appears to be doing well.

In the cerebellum, then, I have three new powers, which I shall for the present call, the organs of strength, of muscular sense, and of muscular action or contention. Next, there is the power of concentrating energy, described as a very deep organ at the back of the head (above parental love). Caution must be divided into simple fear, terror, and carefulness; simple fear being beneath carefulness, and terror at the back. Conscientiousness, I also divide into three layers or feelings, one beneath the other, viz., the sense of right, the feeling of sincerity, and the sense of truth. Also on the coronal region I have the desire of mental elevation or improvement, the sense of motion, the desire of novelty, and the organ of activity, which gives the desire to be busy, to be active and employed, which is lower down, between ideality and caution, and is described as coming down or connecting itself (behind acquisitiveness) intimately with constructiveness, &c.

Beneath the coronal surface, deep in, we have the organ of consciousness, a very important power, and the organ of the will, rather behind, and at each side. If these organs are found to exist, as I am confident they will be, we shall have to re-model much of our phrenological reasoning. Destructiveness must again be divided, into the desire to destroy, and the disposition to hurt, to injure; in the front of this I have organs of taste also, for discriminating what is good for food, and deep in is an organ of hearing.

Beneath the brow, in those convolutions the functions of which are unknown, I have the organs of smell, described as intimately connected with the organs of food before the ear, hunger, pain, pleasure, and touch or sensation.

On the forehead itself there are organs of light, of arrangement of ideas, and the power of contrasting and selecting thoughts—most important intellectual powers. There also appears to be an organ beneath the surface, connected with vision.

My new organs, then, are the following:—

Muscular strength	
Muscular sense	
Muscular contention, or action	
{ Desire to destroy	
{ Desire to give pain, to injure	
Carefulness, fear	
Terror	
Hearing	
Seeing	
Taste	
Discrimination of what is good for food	
Concentrating energy	
{ The sense of right	
{ The feeling of sincerity	
{ The sense of truth	
The sense of motion	
The desire to be busy, to be active, industry	
The sense of novelty, improvement	
The desire of mental improvement, perfectibility	
Mental arrangement, composition	
{ The power to select	
{ The power to perceive distinctions, or to contrast thoughts	
Light	Pleasure
Smell	Pain
Hunger	Consciousness
Touch, or physical sensation	Will

These, then, are the chief points of novelty which I have to propose, with regard to the organology of mesmero-phrenology.

REVIEWS.

Observations on Ulcers of the Legs and other parts, &c. &c. By ARCHIBALD MAXFIELD, Surg. to the South Hants Infirmary, &c. &c. Churchill, London.

This is an extremely useful, but not very well-written little work, in which mild methods of treatment in all descriptions of ulcers are inculcated by precept and illustrated by cases. Mr. Maxfield defines an ulcer to be “an excavation formed on the surface of the body, from which pus, or some other kind of discharge, exudes; but the series of phenomena by which removal, by imperceptible degrees, of portions of the solid flesh is really effected, so that an ulcer is the result, is an inquiry so subtle that it has hitherto eluded every explanation that has been offered, that can be considered perfectly satisfactory and convincing.”—(p. 1.)

He thinks that every experienced surgeon will admit that the lower extremities are more liable to ulcers than the upper, that they are very often difficult of cure by the ordinary methods, and gives the reasons which must be well known to our readers. Mr. Maxfield's second chapter is devoted to a classification of ulcers, but we think with the exception of specific ulcers, chancre, cancer, glandular sores, &c., all these affections may be ranged under one head, the more so as the treatment is the same. The night of nosological classification is happily dispersing fast before the light of practical observation, and the minute subdivisions of diseased action, if not merged into “the Unity of Disease,” is rapidly progressing to simple and natural arrangement. Mr. Maxfield's classification of ulcers is into simple, varicose, integumentary, constitutional, specific, and mixed; the varieties of which he defines in clear and definite terms. He insists that “the local management to be observed in the cure of an ulcer is of equal importance with the constitutional, but that it does not require so much modification.”—(p. 17.) On the commencement of the treatment of ulcers he recommends the surgeon first to make himself acquainted with the condition of the integuments, the venous structure of the limb, and the history and character of the sore, with a view to the administration of the appropriate remedies. The *methodus*

curandi is chiefly observed by the "application of gentle and equal pressure to the whole cavity of the ulcer, assisted by simple dressings, without any kind of greasy ingredient, and firm support to the affected leg by means of a bandage applied from the toes to the knee.—(p. 18.) For the application of pressure to the cavity of the sore, Mr. Maxfield employs various substances. "Sponge tent cut to the size of the wound, and secured in it by a bandage, firmly applied, answers very well."—(p. 19.) "Charpie answers the same purpose—(p. 20)—and we are inclined to prefer it. "Sometimes a sort of dough may be employed, composed of equal parts of prepared chalk and flour, mixed with a sufficient quantity of water to give it the requisite consistence; the ulcer is then filled with the mass so formed, and when hardened by the evaporation of water used in the blending, it is sufficiently stimulating, when pressed upon by a bandage, to cause the ulcer to send forth those florid granulations, which indicate a healthy condition, and which are essentially necessary for the separation of the breach in the corporeal substance."—(p. 20.) We have repeatedly, especially in military hospitals in a tropical climate, experienced the most decided benefits from the application of pressure. In fact no other plan of treatment would succeed, and while the men under this mode progressed rapidly, and were dismissed cured in a very short space of time; at another station, where the surgeon followed the Boerhaavian plan the hospital was always crowded with ulcered patients, while his non-success was attributed to the air of the locality, and not to improper treatment. The inspector of the military hospitals, impressed with the idea that it was really the air of the place caused them to be removed, as occasion required, at first to the station of which we had charge; but on inspecting the mode of treatment, and directing it to be followed at the other stations, ulcers ceased to be formidable diseases. We remember upon one occasion no less than 40 men, who in an incredibly short space of time, under the care of the surgeon who relieved us, and whose treatment was the same as that recommended so ably by Mr. Maxfield, were reported fit for duty. In many of these the ulcers had resisted all the experienced modes of treatment, which induced a suspicion of malingering that led to many stringent regulations, but which proved, on change of treatment, to have been unfounded. On the whole, we recommend this work very strongly to our readers, especially to surgeons entering upon practice, and those who are about to visit the colonies, take charge of convict vessels, or are appointed to army or naval hospitals.

EXTRACTS FROM FOREIGN JOURNALS.

(Translated from the *Medicnische Zeitung*, for the 'Medical Times')

The *Berlin Medical Gazette*, of July 13, 1842, contains two papers:

1st., *Upon Wounds of the Heart, &c.*—

2nd., *Constitution of disease and the state of the weather, during the month of June, 1842.*—A paper shewing that domestic animals suffered from the same constitution and diseases as mankind, facts, which it is much to be regretted, are seldom taken notice of in this country. The diseases were of an inflammatory rheumatic character, pneumonia, pleuritis, rheumatic catarrhal fever, inflammation of the eyes, gastric fever with great congestion of the brain, which frequently occasioned delirium tremens;—horses especially suffered from these diseases,—sheep and cattle from the epizootic affection of the mouth and hoofs.

July 20th.—The continuation of the paper on wounds of the heart.

July 27th.—1st.. *On the Mechanical Leech.* (C. KLUGE.)—He first describes the artificial leech of Whitford, (New English Journal, 1816,)—the blood sucker of Demours; (Demours in *Journal Général de Médecin.* T. LXVI. p. 161-367,) after these he proposes a contrivance of his own, the principle of which is to make a puncture similar to that of the leech, then to apply a sucking apparatus, or exhausting pump, which he describes; he considers the problem of inventing an artificial leech, like the egg of Columbus, no difficulty. There can be no doubt of its practicability, if the property can be given to it, possessed by the leech, of its delicate sense of touch, &c., by which it can distinguish, whether or not it has pierced into any of the subcutaneous vessels, which unless it can do, it will never be superior to the present mode of cupping.

2nd., *"Baths of Broth from Bones, no means of cure in the Bowel Affections of Children," a reply to the paper of Dr. Asmus, (Dr. STEINITZ.)*—The writer says these baths are of no avail in this complaint, which he denominates enteritis folliculosa chronica—the children dying notwithstanding, with vomiting, diarrhoea, and convulsions.

3rd., *List of Births and Deaths in Berlin for May, 1842.*—In this month were born, 406 males, 428 females, total 834; deaths in the same period 736; excess of births, over deaths 98; married 268 pair; the most remarkable is the number of illegitimate births, 55 males, 62 females, total 117; being nearly 1-7 of the whole births. The deaths below 15 years were 370; above 15, 366. Of the above deaths 242 were in their first year,—a number far exceeding the proportion in England in the worst localities,—as in the first annual report of the registrar general, 270 out of 1000 are stated as the maximum, and 180 to 1000 as the minimum, whilst the above gives a proportion of nearly 339 per thousand deaths.

4th., A royal decree, which is curious as shewing the manner in which that government meddles in private affairs, and which in this country would be considered, and justly, downright tyranny. We transcribe it.

The collection of laws of the Royal Prussian States for 1842, No. 12, contains the following official notice.

"Cabinet order of March 8th, 1842, concerning the obligations of apothecaries to whom licenses are granted, on taking possession of the shop, of their predecessors.

"I approve by the advice of the council of December 31st, of the past year, that on the sale of a practice to an apothecary to whom a new license has been granted by the medical board, on the proposition of the former apothecary or his heirs, that the contract may be permitted, provided the materials, vessels, drugs, &c. necessary for carrying on the business, be in good condition at the time, and that possession be taken only of a quantity suitable to the compass of the business. To attain which object, as to the quantity and price of the same; appraisers shall be appointed understanding the business, of which the out-going apothecary has to name one, the coming-in apothecary the second, and the government the third. This last shall conduct the proceedings and fix the price of taking possession. Against the price fixed no appeal to judicial arbitration is allowable. The in-coming apothecary is bound, at the desire of his predecessor to pay the sum fixed in ready money. Each side is to bear half the expenses of the proceedings."

Although the above is by no means in accordance with the feelings and laws of this

country, yet on the other hand the honours conferred by the Prussian king on meritorious members of the profession may be well imitated by our authorities, with advantage, not only to the profession but, also to the public, as it would greatly stimulate the profession at large to the improvement of medical science. Scarcely a number of the *Berlin Medical Gazette* appears without the notification of different orders of knighthood, or other marks of honour being conferred on members of the profession.

ITALIAN.—*Extraordinary Transposition, or Metastasis of a Leucorrhœal Discharge which took place from the Umbilicus.* By M. Ottani.—A lady, 30 years of age, of a nervous temperament, who had been married some time, became affected with a leucorrhœal discharge, accompanied by pains in the limbs, discoloration of the countenance, &c. On consulting M. Ottani, he prescribed the internal administration of the sulphate of iron, together with small doses of calomel and conium, and a weak injection of sulphate of zinc. In about a week the discharge ceased. A short time afterwards M. Ottani was again called to this lady. She complained of having laboured for several days under a state of extreme lassitude and depression of spirits. There was nothing discernible but a peculiar contraction of the features, which, however, is generally the forerunner of some grave disorder. At about 5 o'clock the following morning, she was seized with very sharp pains in the lower part of the abdomen, accompanied by nausea and slight vomiting. The pulse was small, contracted, and scarcely perceptible, the tongue tremulous, thirst insatiable, skin cold, and the forehead covered with a clammy perspiration. Thinking there was some gastro-intestinal irritation, M. Ottani prescribed castor oil, fomentations and lavements. Still the pains increased in intensity, till in the course of the morning, there suddenly commenced to escape from the umbilicus, with entire cessation of pain, a clear yellow matter, precisely similar to the discharge which previously took place by the vagina. This lasted for more than a month, and only ceased when, from natural causes, the discharge returned to its original seat. Since then, the patient has been free from suffering, and enjoys as good health as she ever has done.—(*Annali Medico-Chirurg.*)

Case of Third Dentition.—One of the daughters of the Countess Z. presented nothing abnormal in the evolution of the first teeth, when at the age of six she commenced shedding them. The same regularity was observed in cutting her second teeth, so that the permanent ones had all appeared by the time this young lady had entered her twelfth year. At this period, without any known cause, the incisor teeth fell out. This loss greatly affected the patient as well as her friends, who believed it irreparable, when they perceived new teeth appear, and become developed in the place of the former ones. The same phenomena occurred with all the other teeth, which dropped out and were successively replaced, so that before the end of the year, a third complete dentition had taken place in the most regular manner.

This case is not unique, several such instances have been before narrated, but they have generally occurred in aged people, and have been confined to but two or three teeth, instead of the entire set. Under this double point of view, therefore, the above case presents considerable interest.—(*Il. Raccoglitori Medico.*)

FRENCH.—ACADEMY OF MEDICINE.—Microscopic Characters of the Phthisical Sputa.—M. Sandras stated that with the aid of a powerful microscope, he had found in the phthisical sputa numerous rounded globules, isolated one from another, of a greyish white colour, similar in size and form to pus globules, with the exception of the latter being clearly defined, whilst the globules of the sputa were surrounded by a layer of a downy appearance, which was not removed by washing. To be enabled distinctly to perceive these small bodies we must be careful not to collect too large a quantity beneath the glass of the instrument. One of their characters is that of being almost perfectly opaque towards the centre, but becoming gradually clearer towards the edges. M. Sandras states that he has observed this appearance in forty-nine cases of decided phthisis. All phthisical patients, however, do not expectorate tuberculous sputa, and, even in the same patient, all the sputa do not present the same character. This may be easily explained; for, besides the pus from tuberculous cavities, phthisical patients often expectorate mucus from concomitant bronchitis. On the other hand, it is remarkable that these globules are not met with in the pus of tuberculous excavations seated in other tissues; as in the discharge from ulcerated tuberculous glands, or in intestinal ulcerations arising from the same cause. M. Sandras then states, that on examining the expectoration of simple catarrh, he always found sputa similar in appearance to those of phthisical patients, but deprived of the globules. They present, indeed, little bodies, but differing greatly from the tuberculous globules:—1st, inasmuch as they are not isolated one from another; 2nd, as they have not all the same volume; 3rd, as they disappear, or appear but for an instant only, under the microscope; 4th, as they present striæ upon their surfaces. In spite of these different characters, some cases presented great obscurity. These were, however, the exceptions to the rule; and M. Sandras thinks that this new means of examination will assist in completing our diagnosis. He does not consider the pus in the sputa as formed of the tubercles themselves, but as consisting of a secretion from the parts in the midst of which the tuberculous matter is deposited.

Typhoid fever occurring in old age.—M. Rayer related the following interesting case of typhoid fever occurring in advanced age. A woman named Louise Menetrier, aged 56, was brought on the 24th August to the hospital *la Charité*, after being ill for five days. Her disease had commenced by a sensation of lassitude, followed by general uneasiness, vomiting, and constant purging; the second day she complained of great heaviness, and on the third day the diarrhoea ceased. While at home she had taken nothing but refreshing drinks, with simple lavements. From the commencement of the disease there had been complete insomnolency. No epistaxis. On the 25th, the patient was in a state of profound stupor; she scarcely answered the questions addressed to her, even when spoken in a loud voice. Besides the state of stupor, the eyes, which were half closed, had lost their usual brilliancy; the pupils were dilated; the skin hot and dry; four small red spots were visible on the abdomen, which disappeared under the pressure of the finger, and which, in colour and size, resembled the lenticular stains sometimes observed in typhus. No *sudamina*. The lips were red in the centre, but encircled with a blackish pellicle; the tongue was dry and covered with a thick brown coat, especially on its upper surface; the thirst great. The abdo-

men was tympanitic, but did not seem painful on pressure; borborygmus was heard over a large extent, especially in the right iliac fossa. The patient passed her urine involuntarily, although the bladder was not distended. The pulse was small, feeble, and about 100 in the minute. The respiration did not appear constricted; there was no cough, nor expectoration. (Lemonade, poultices, lavements, two blisters to the thighs.) The next day the symptoms were aggravated, the stupor more profound, and it was impossible to obtain a single word from the patient in answer to any question. She died in the course of the day.

Autopsy. 43 hours after death.—Although it was excessively hot, putrefaction had scarcely commenced. Several groups of small cicatrices similar to those succeeding syphilitic pustules were noticed on the skin of the legs. **Abdomen.**—There was no effusion of serum into the peritoneal cavity. On the peritoneal surface of the extremity of the small intestine, we remarked some reddish spots which, by their seat, form and extent, seemed to correspond to the glands of Peyer. The intestine being opened, a number of these spots, of various dimensions, were found projecting largely from the surface of its mucous membrane. The most extensive were situated towards the termination of the ileum. Near the ilio-cæcal valve there existed large and prominent spots circumscribed by a sort of ring. Between these spots, the mucous membrane was studded with white or yellowish points. Some of the mesenteric glands were red and enlarged. The spleen was softened and rather larger than in the sound state. The liver and stomach were healthy. The kidneys, larger than natural, had lost in some parts their smooth appearance, and their surface presented a grained aspect. The bladder and womb were sound. **Chest.**—The heart natural in size, was rather flabby, its cavities were filled with black and liquid blood. The lungs were in most parts crepitant, but dark and engorged posteriorly. There were no tubercles. **Head.**—There was a little serosity in the pia-mater and in the ventricles of the brain.

Efficacy of Vaccination.—M. Bousquet reported upon a memoir by Dr. Milon on the above subject. M. Milon states the following as the result of his observations during an epidemic of variola which not long since occurred at Sorreze. Variola is always checked by vaccination; all however do not share its protective influence. Among those who had been vaccinated a long time previously, some cases of *varioloid* disease occurred, a disease very different from true variola, but which has still the same origin, since they may both give rise indifferently the one to the other. We often hear it affirmed, says M. Milon, that vaccination has but a temporary preservative influence. If by this it is meant that a considerable time after vaccination, *varioloid* disease may occur, there is good reason for the assertion; but it is decidedly an error to suppose that in vaccinated subjects, true variola becomes manifested with all its characters. Another question has been agitated. Is vaccination a cure for variola? Neither Jenner nor his disciples ever asserted such to be the case. Vaccination is not a cure for variola, but it is a preventive to it: it substitutes itself in its place; to this, however, its advantages are confined. M. Robert, in an epidemic at Marseilles, saw 14 individuals die of small-pox, although they had been vaccinated on the first appearance of the symptoms of the disease. M. Milon does not believe in the progressive deterioration of the vaccine virus. M. Bousquet stated that he entertained a similar opinion up to 1836,

but it was impossible from what he then saw of the effects of the new vaccine matter, not to acknowledge that the old had lost its efficacy. Lastly, M. Milon examines the influence of vaccination with regard to population. This question is, however, of difficult solution; for, although there is a considerable growth of population since the introduction of vaccination, there are so many different causes accounting for this increase, that it is almost impossible to assign in an exact manner, what influence vaccination may possess in this respect.

A vote of thanks to the author was unanimously agreed to.

Upon Wounds of the Heart, especially in their Forensic Relations.—(Continued from page 391.)

—3th. Death from wounds of the heart may farther originate from the impression which the wounding of so important an organ makes through the nervous system on the principle of life. It has been said truly of the foregoing, that such an obscure cause of death ought not to be received, where one more clear is already manifest, and it may probably not often happen that any one with a wound of the heart dies from this cause alone; yet this source of death, obscure as it is, certainly merits consideration. It is well known what high psychological influence the heart exercises, for all passions of the mind are in a certain measure reflected upon this organ; participating with so many spiritual as well as corporeal affections, exercising such great influence through its diseased affections upon the nervous system and upon the mind. The author of this observed in the case of a young man an enlargement of the heart suddenly come on from fright, caused by a night conflagration, from which he died in half a year, and who had not before the slightest symptom of disease of the heart, but in that instant it indubitably supervened. Why, therefore, should it not be admitted that a man may suddenly die from the nervous and psychological impression, which is made by the wounding his heart? We also observe in most cases of wounds of the heart a tremendous feeling of anxiety, seated as it were on the breast, which certainly springs often from pure nervous sources, as Steifensand justly remarks, without depending upon the pressure of the blood upon the lungs and heart. Latham and Andral cite cases, in which all the symptoms had great resemblance to inflammation of the brain, and which for this reason were treated as such, where after death the brain was found quite sound, but there was present a marked violent pericarditis; wherefore Andral is of opinion that no organ respectively gives forth its individual sensibility, the wounding of which was not in the condition to call forth the various nervous phenomena, and in such a manner, indeed, that very different conditions arise sympathetically, the seat of which is transferred to the central formation of the nervous system, and its membranes. According to these observations and analogies, which prove the great nervous and psychological importance of the heart, we cannot doubt the possibility that a man may die suddenly from the nervous impression of a wound in the heart. It is only necessary in any such case that no other valid cause of death should be present.

4. Death in wounds of the heart may depend upon the inflammation of this organ, consequent to the wound. No one doubts that this cause of death can be possible. Inflammation of the heart commences either directly after a wounding of the heart, or where inflammation of the pericardium extends itself from the pericardium to the heart. Blows and injuries upon the breast, also shocks upon the breast, with-

out the heart being directly injured, can also cause a fatal inflammation of the heart. But to support this, it is necessary that during life the symptoms of inflammation of the heart should be present, although these symptoms may often become obscured by other circumstances and complications, by the extravasation of blood, by the inflammation of neighbouring organs existing at the same time &c., and further, that should death occur at the same time, in which it ought and must occur as the consequence of inflammation and its termination, and especially that those anatomical changes should shew themselves in the dead subject, which pathological anatomy exposes as consequences of the various forms of heart inflammation, pericarditis, endocarditis, carditis, and their terminations.

Of late years it has been believed that we must ascribe to the heart a small degree of liability to wounds, and a circumscribed sympathetic influence. This belief was induced by the small wounding effect of acupuncture, and the experiments on animals, whose hearts had been pierced by a two edged needle, from which it appeared that slight wounds of the cavities of the heart are far from being fatal, that such wounds of the heart are painless, that the heart less easily becomes inflamed from mechanical irritation than other organs, and therefore seems to possess less sensibility than the other organs belonging to organic life, e. g. the liver. Never, indeed, were there found in the hearts of animals clear traces of their having been in a state of inflammation, nor any adhesions of the heart to the pericardium. Against this it may be here objected, that from such small wounds, the effect produced by large ones cannot be legally concluded. A two edged needle, of scarcely one line in breadth, separates the fibres from each other, and pushes them aside more than it wounds them. The wound produced by it is very small, and, on the other hand, the small wound will be immediately again closed by the operation of the fibres of the heart crossing in different directions.

Secondly, from the want of pain and sensibility of an organ from mechanical irritation, its sensibility and injury cannot in general be concluded; for the heart, as an internal organ, well protected against external accidents, does not, and cannot, apply its functions to react against external mechanical influences; and for this reason also has it only little sensibility against such. But it by no means thence follows that it cannot afterwards react against the existing state of mechanical irritation, or in other words, that it is little liable to injury in this respect. In the brain, which no one will maintain to be an organ of little sensibility, there also exists a similar condition. One may cut off whole slices from this, without the wounded person being sensible of it, and yet how liable it is to be injured by slight wounds! how easily can inflammation of the brain and its membranes be developed! But here also, if any where, is the conclusion from animals to man, highly uncertain. In the hearts of animals a circumscribed sympathetic influence may find place, but not in the heart of man. Such a mass of undeniable matters of fact and observation attests this, that it seems quite unnecessary to bring forward further evidence. The endeavours to defend the view that wounds of the heart are not so fatal as they were formerly held to be, may be laudable, but it cannot be eminently supported by such data. They prove no doubt that death is the consequence of heart inflammation only in the fewest cases of wounds of the heart, the death being much more frequently caused by hæmorrhage, and the pressure of the extravasated blood upon the

heart and lungs; but the possibility and certainty that in individual cases, inflammation is the consequence of wounds of the heart, is even as little to be doubted.

We turn now to the circumstances to be considered, that we may be able to avert the danger, and to bring the wound to a state of healing, of which the following are the principal.

1st. *The Depth and Largeness of the Wound.*—Wounds which do not pierce through the muscular substance of the heart, are, as may easily be conceived much less dangerous, than those that do; though these are not always fatal, if they are small and do not exceed one line in largeness.

2nd. *The direction of the Wound in relation to the course of the separated fibres.*—These relations to which Dupuytren has of late especially drawn attention, are of great weight, and by him was chiefly made known, the possibility of healing small penetrating wounds of the heart. "In the greater number of cases," says Dupuytren, "the direction of the wound is not only transverse, but also deviating therefrom in different degrees, hence the wound gapes by the irregular contraction. If many fibres are cut through transversely, so arises a greater opening of the wound and thence also a more easy exit for the blood, than when the wound runs parallel with the fibres. Now as the heart consists of many layers of fibres lying over each other and running in various directions, so it arises, that, when in perforation of the cavities, the edges of the wound are drawn away from each other by the action of some of these fibres, on the contrary they are drawn near to each other by others, by which the wound is in a certain manner closed and its healing will be favoured. Let us take the following for instance. There is a wound of the left ventricle, on its anterior wall, and in an oblique course from the septum ventriculorum to the left margin of the heart, thus three of the layers of fibres forming the ventricle become wounded, of which the superficial and middle run from below and to the left, but the interior, which exceeds both the others in thickness, and is crossed by them. Through this wound the fibres of the inner layer are therefore divided transversely, but the superficial fibres are in a certain manner only pushed from each other, by which means the size of the opening is lessened, and the out-pouring made more difficult; it next occasions a provisory, therefrom a definite obliteration, and in a manner at length brings it to a state of healing." Thus in acupuncture the point of the instrument parts the fibres of the tissue of the heart from each other, cuts through in a relative manner only a few of them, and when it is withdrawn, the fibres fall back into their former position and close the wound. Nay, when the result happens by larger wounding instruments which cut through the walls of the heart, with quickness and power, or by shots and bullets which are forced into the heart, a similar favourable result appears to take place. The case of Latour has been already brought forward, in which, after six years a bullet was found in the right ventricle, after the man had died of a different disease. Another case has before been related by Randall, where a negro boy had received a discharge of small shot in the right auricle and right ventricle of the heart, and yet lived two months and six days. These cases, at all events, prove that even from a shot the wound in the heart can again close spontaneously, and in general, death is not necessarily caused through hæmorrhage.

3rd. *The form and size of the Wounding Instruments.*—The healing of a wound in the

heart is from the first, possible, when it is caused by a thin stabbing instrument, or even by a stabbing and cutting one at the same time; yet that instrument in so far as it is thrust into the heart must not exceed the breadth of one line.

4th. *The withdrawal of the Instrument from the wound.*—Cases occur where notwithstanding the instrument remains in the heart, the healing of the wound goes on, and though the remaining of the instrument for the moment, (by closing the wound and hindering the hæmorrhage) may prevent sudden death, an uncontrollably fatal inflammation of the heart will mostly follow therefrom. One cannot conveniently however, allow a projecting instrument to remain. One would therefore, where it can be done, endeavour to withdraw it as soon as possible, in the hope that the wound will contract itself. In such case, should the patient have to make any testamentary dispositions and be in a condition to do so, the withdrawal of the instrument must be put off, until the duty is performed. If the withdrawal of the instrument be impossible, or the point of the stabbing instrument broken off and remaining in the heart, or if small shots or a bullet are in the heart, if death does not occur from another cause, a fatal inflammation is to be feared, yet it may happen through a fortunate sport of nature, that the inflammation may not be violent, and that the foreign body may become isolated, by being encapsulated, which is possible, as proved by the case of Latour. But with pointed bodies this would not so easily be accomplished, for the unceasing motion of the heart itself, will cause new wounding, and infallible inflammation as in the case cited by Dupuytren, of the melancholy jeweller. But in animals the woundableness of the heart certainly in this respect, appears to be less, for it has frequently happened, that pointed foreign bodies have been found in the hearts of animals, in other respects quite sound.

5th. *The Situation of Wounds in the Heart.*—One would imagine that wounds of the auricle must be more fatal than those of the ventricle, as these latter have their fibres thicker and more rigid, which after a wound would sooner contract themselves than the lax walls of the auricle. This is the case with regard to the right ventricle. Experience shews that wounds of the right ventricle, which most frequently occur, are also least suddenly fatal. Not so, however, is it with the left ventricle, which destroy more quickly than the auricle; but there is here, probably, another cause of death, consisting in the spasm of the rigid muscular fibres produced by the wound through which a sudden stoppage of the circulation ensues.

The place also of the ventricles, in which the wound is situated, may here come into consideration, as also the circumstance that the canal of the wound passes obliquely between the muscular fibres of the heart,—both advantages, as shewn by the already cited Bohn; for these can operate, so that death does not suddenly follow. Bohn quotes from Diemerbroek, to shew that in protracted death, from wounds of the heart, these wounds have been in the upper part of the ventricle, between the valves, so that by the contraction of the heart all the blood of the right ventricle could not have been driven out through the wound.

6th. Other contingent relations may contribute to the healing of the wound; the posture of the patient, his quiet demeanour, his nursing and treatment, a proper quiet of mind, &c.: these may be understood of themselves.

No direct help can be rendered to the closure of the wound; all that can be done, is, to take care that the patient be in a state of the greatest possible quiet both of mind and body: the

force of the action of the heart, by which the hæmorrhage is every moment increased, must be brought to the minimum, by general bleeding, cooling medicine, digitalis, and in fine the contraction of the fibres of the heart must be sought to be increased. With this last intention cold cataplasms and acids might be applied to the region of the heart. This treatment is then quite appropriate to the keeping back the inflammation. The external wound must, in penetrating chest wounds especially, be closed in the quickest manner possible. Naturally, however, such a mode of proceeding will only give hopes of a fortunate termination, where the wound in the heart is small, and the hæmorrhage is not considerable. In great extravasation of blood, where the symptoms of hæmorrhage and the greatest exhaustion prevail, and one entire half of the chest is filled with blood, a condition, to the knowledge of which, auscultation and percussion must be taken in aid; we must prevent the flow of blood, that death may not be accelerated, employ the measures above mentioned, and so use the pressure of the extravasated blood, which, like a plug, re-acts upon the wound in the heart, that by degrees, a plug of blood may form, and the wound come into a state of plastic adhesion. In such cases if the feeling of suffocation occurs, it will arise according to the accurate remarks of Steifensand, only from nervous sources, and be transitory. But if death from suffocation immediately threatens, nothing else may be left, but, as Dnpuytren did by the Duke of Berry, to open the wound, and let out a portion of blood from the cavity of the chest, although in general this may be very injurious, as through this, the wound in the heart, perhaps, already adhering together, may be opened again, and the chest also again fill with blood. In other cases, the removal of the extravasated blood, as in wounds of the lungs, is only to be attempted, when one may presume that the wound has gradually closed itself, and that it is not to be hoped, that the extravasation will disappear by absorption, in such case paracentesis may be performed in a proper place.

In a case where the symptoms of suffocation originate from the blood collected in the pericardium, whilst the wound in the pericardium may, by any accident, have become obstructed, and have closed itself, which accident auscultation and percussion may perhaps discover, if little or nothing were done beside the very doubtful operation of opening the pericardium, death might rapidly supervene. And it is the same when the coronary arteries of the heart are injured and opened.

(To be continued.)

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MEDICAL MEMS. OF THE WEEK.

THE ECLIPSE.—The following is an interesting portion of Arago's communication on the recent eclipse of July 8:—M. Lenthéric relates a curious fact as to the termination of the phenomenon. The dazzling effect of the sudden return to the light was such, that he could not, at the moment, distinguish the hands of the chronometer, and, therefore, was

unable to determine the moment of the event with the precision desired. An interesting experiment was made by the Faculty of Sciences of Montpellier, to ascertain the luminous intensity at the different periods of the eclipse. The means employed was the daguerreotype. All the proofs gave a sufficiently defined image of the phenomenon to enable the members of the faculty to determine, by actual admeasurement, the relative apparent diameters of the sun and moon. At Toulouse, M. Flangerques not only noted down a fall in the temperature of 4 deg. centigrade during the eclipse, but also saw the mercury fall in the barometer. The mercury fell to thirty-one hundredths of millimetres below the height at which it would have stood if the difference of temperature had been the cause of the variation. This depression is, indeed, of itself unimportant, but it nevertheless shows a deviation from the normal action of the barometer, for it is known that the instrument usually goes on rising from the getting up of the sun until nine in the morning, when it attains the maximum. M. Arago states, that during the latter period of the eclipse, he saw, on the edge of the black disc of the moon, a sort of protuberance of fire, two minutes in height, and presenting an appearance like that of the glaciers of the Alps illuminated by the setting sun. At Narbonne, the appearance was that of a distant light-house. M. Littrow, of Vienna, also noticed this protuberance, and gives to it an extent of five minutes, or the twelfth part of a degree. M. Bouvard, of Digne, distinguished luminous points proceeding from the edges of the moon, but he attributes them to divergent rays. There will naturally be much speculation as to the character of the protuberance noticed by M. Arago. Some members of the Academy have already thrown out the idea of a mountain of the sun rendered visible in the atmosphere of that body. The theory of Herschel is, that the sun, which is the source of light and heat to us, and which has been regarded as an incandescent body, is in reality dark and inhabitable. M. Arago, whilst he affirms that the protuberance which he observed is not of the moon—no such discovery having ever been made even with the most powerful telescopes—does not admit that it is a mountain of the sun, not that there is anything repugnant in the laws of science in supposing the existence of a mountain of the sun, 17,000 leagues in height—or, according to M. Littrow's calculation of the extent of the protuberance, 50,000—for objects are only large or small comparatively, and Herschel has shown that the sun, by its prodigious mass, might have mountains, even 120,000 leagues in height; but M. Arago's doubts are founded upon the diversity of opinions as to the character of this protuberance. This mountain, if it were one, would have presented a fixed projection and the same angle to each of the observers, which was not the case. M. Arago, therefore, is disposed to regard the phenomenon as one of diffraction. It is proposed, however, to determine this point by experiments with artificial means on the summit of some high mountain. Another curious circumstance mentioned by M. Arago is the following:—At about the middle of the eclipse, M. Arago was able to perceive the whole disc of the moon. What was the light which enabled him to do this. It could not be the ash-coloured light left by the eclipse, for that is exceedingly feeble. There is, in this fact, a mystery which is perhaps impenetrable in the present state of astronomical science. The effect of the eclipse upon the population of Perpignan, who were watching it, is described by M. Arago as singular and even affecting. The effect of the eclipse upon the population

of Perpignan, who were watching it, is described by M. Arago as singular and even affecting. The gravest persons were unable to restrain expressions of joy when the sun reappeared, and, whilst the eclipse lasted, anxiety was depicted on every countenance. At the foot of the citadel in which the astronomers were making their observations, was a regiment of soldiers. They were laughing and full of gaiety until the face of the sun was obscured, when suddenly they seemed struck with dismay and stupor. The effect upon animals was so remarkable, that, if some portion of what is related did not rest on such good authority, it would not be credited. One of the friends of M. Arago had placed five healthy linnets in a cage. During the sudden darkness of the eclipse, three of the five died. The oxen formed into a circle, with their horns thrust forward, as if preparing for the attack of an enemy. At Montpellier, bats and owls left their retreats, and sheep laid down as for the night, and the horses in the fields were in a state of terror. In addition to these facts, it was stated to M. Arago, in the Academy, on the authority of M. Fraisse, a distinguished naturalist, that a swarm of ants in full march stopped short at the moment of occultation.

MEDICAL NEWS.

FRENCH SCIENTIFIC HONOUR.—A number of Frenchmen of distinction in Paris are stirring heaven and earth to remove the foul stigma of having elections to the Institute and the various scientific academies, preceded by canvassings and personal solicitations. There has been nothing resembling their lamentations since those of Jeremiah over the sins of Judah—or of Cato over the luxuries of Rome. There is an abuse, that is certain; but it is hardly worthy so heroic a fuss. But France is always grand in trifles!

Drs. James, Elliot, Cartmell, Jackson, and Oliver, and Messrs. Bowman, Elliot, Hodgson, Kerr, Linton, and Mortimer, surgeons, all of Carlisle, have passed a series of resolutions in favour of the establishment of a medical institution in that city, for the relief of the infirmities of the poor, either at home or within the walls of an hospital, the services of every legally qualified practitioner being accepted, if willing to serve.—*Gateshead Observer.*

FRENCH JURISPRUDENCE.—A singular action is now pending at Marseilles, marked in its origin and course by characteristic circumstances. The Government have lately issued a law, decreeing a new system of weights and measures, and fixing severe penalties for the use of any terms but those prescribed in the new enactment. The French practitioners however, finding the old system more safe or convenient, have continued its use in a great measure. A few days since the houses of all the pharmaciens at Marseilles were entered by the police, their papers searched, and the prescriptions of the suspected physicians overhauled and carried away in triumph. The case came on before the Juge-de-paix, who immediately dismissed it; a result so little pleasing to the public prosecutor that he has appealed to a higher court, whose sentence the affair now awaits. The gross violation of domestic liberty, is not the least remarkable circumstance in this Gallican proceeding. In social matters France is as much an over-governed, as ours is an under-governed country.

HOMŒOPATHY.—The homœopaths are getting Lyons into a tumult. The managers of the hospital have divided all cases of hydrophobia equally between them, and their more regular colleagues. Of course, the latter be-

ing the regular physicians and surgeons of the Institution, like not such interference of the managers with their duties, and especially for such a purpose. The reclamations on one side, and conelamations on the other, harmonize very ill. The trial will probably do little honour to homœopathy, and less service to its patients.

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3. Quadrille; La Belle Poule;—Bosisio.
4. Duett; The Echo; Mrs. Wilson, Mr. Martin;—Braham.
5. Waltz; Die Aventiarer;—Lanee.
6. The Mocking Bird; Flute Obligato; Mrs. Wilson, Mr. Saynor.
7. The Land; Mr. T. Longhurst.
8. Stop Galop; Adams.

PART II.

9. Overture; Zampa;—Herold.
10. My Boy Tammy; Mr. F. Martin;—Scotch Air.
11. Waltz; Brandhofer;—Strauss.
12. Trio;—Calcott.
13. Solo; Flute; Mr. Saynor;—Saynor.
14. Can I'er forget the valley; Mr. F. Martin.
15. The Mermaid's Cave; Mrs. Wilson;—C. E. Horn.
16. Quadrille; Storming of Margagzon;—Bosisio.

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There will be no Evening Lectures.
DESCRIPTIVE and SURGICAL ANATOMY—Richard Partridge, F.R.S. Nine, a.m.
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CHEMISTRY—J. F. Daniell, F.R.S., and W. A. Miller, M.B. Three p.m.
MATERIA MEDICA and THERAPEUTICS—J. F. Royle, M.D. F.R.S. Quarter-past Ten, a.m.
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